

**Working Paper**  
**Volume 2021 Number 544**

# **Marginalisation from Education in Conflict-Affected Contexts: Learning from Tanganyika and Ituri in the DR Congo**

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**Gauthier Marchais, Sweta Gupta, Cyril Brandt,  
Patricia Justino, Marinella Leone, Eustache Kulumbwa,  
Olga Kithumbu, Issa Kiemtoré, Polepole Bazuzi Christian  
and Margherita Bove**

**January 2021**

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The data collection instruments – the survey questionnaires and qualitative study questionnaire, Annexe 3B and Annexe 3C – can be provided upon request. All Tables and Figures presented in this Working Paper and its Annexes are the authors' own.



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## Summary

This Working Paper is one of two Working Papers which constitute the central research outputs of the REALISE research project. The REALISE research project is part of the REALISE education program, funded by the UK's Foreign, Commonwealth & Development Office (FCDO) and implemented by Save the Children, in partnership with World Vision. The research component is led by the Institute of Development Studies, in partnership with Marakuja Kivu Research, a non-profit research association based in Goma, DRC. This Working Paper analyses how violent conflict can enhance or reduce pre-existing forms of marginalisation and second, how new forms of marginalisation emerge as a result of violent conflict. To do so, we focus on the province of Tanganyika in the DRC, where the so-called 'Twa-Bantu' violent conflict has been disrupting the education sector since 2012, and secondarily on the province of Ituri, which has been affected by repeated armed conflicts since the 1990s. We use a mixed methods approach, combining quantitative data collection methods and several months of qualitative fieldwork. The study shows that the political marginalisation of ethno-territorial groups is key in understanding marginalisation from education in contexts of protracted conflict. First, because marginalisation from education is both a result, and driver, of the historical marginalisation of ethno-territorial and identity groups. Second, because some groups might be more severely affected by violent conflict. Our results show that the Twa minority of Tanganyika has not only been more exposed to violence during the Twa-Bantu conflict, but also that exposure to violence has more severe effects on the Twa in terms of educational outcomes. We analyse key mechanisms, in particular spatial segregation, and the social segregation of schools along ethnic/identity lines. We also analyse the interaction between ethno-cultural marginalisation and economic, social and gender-related marginalisation.

## Keywords

Education; education in fragile contexts; dynamics of violent conflict; Democratic Republic of the Congo; conflict research; Pygmy populations of central Africa; conflict and marginalisation.

## Authors

**Gauthier Marchais** is a Research Fellow at the Institute of Development Studies (IDS). He works on social transformation in contexts of violent conflict. His current research focuses on education in contexts of protracted violence, with a focus on the provinces of South Kivu and Tanganyika in the Democratic Republic of the Congo.

**Sweta Gupta** is a development economist specialising in applied microeconomics and evaluation of public policy. Her research focusses on economics of education, intra-household dynamics, and gender economics. She is currently a Research Officer at the Governance cluster at IDS. She recently completed her PhD at the University of Sussex.

**Cyril Brandt** finished his PhD at the International Development Studies programme at the University of Amsterdam in 2018. He is an Associate Researcher at IOB (Institute of Development Policy, University of Antwerp) and Honorary Associate at the Institute of Development Studies, University of Sussex. His work has focused on: the political economy of educational governance reforms and teacher salaries in protracted violent crises, particularly the Democratic Republic of Congo; teacher governance in violent contexts and violence against teachers; and the political economy of an unfinished population census. Next to his academic work Cyril works as a facilitator for anti-racism / critical whiteness workshops.

**Patricia Justino** is a development economist who works at the interface between Development Economics and Political Science. Her research focuses on the relationship between political violence, institutional transformation, governance and development outcomes. She is a leading expert on political violence and development, and the co-founder and co-director of the Households in Conflict Network. She is currently a Senior Research Fellow at UNU-WIDER and Professorial Fellow at IDS (on leave).

**Marinella Leone** is Assistant Professor of Economics at the University of Pavia in Italy. She previously worked as Research Fellow at IDS in the UK. She is a Research Affiliate of the Household in Conflict Network and a Fellow of the Centro Studi Luca D'agliano (University of Milan). She is an applied development economist and use micro-level data for my research. Her main research topics include the analysis of conflicts (long-term and intergenerational effects), early

child and adolescence development, gender (domestic violence, and women's empowerment) and education.

**Eustache Kuliumbwa Lulego** is researcher specialised in quantitative and qualitative research in conflict affected contexts, and project evaluation. He has 13 years of research experience across the eastern provinces of the DRC, and extensive expertise on local languages, customs, and contexts. He has worked with a range of national and international universities and NGOS.

**Olga Lauriane Kithumbu Mashingo** is a Congolese sociologist specialized in the evaluation of development projects, qualitative and quantitative research, with 22 years of experience with national and international universities, NGOS, and the UN. She is currently a researcher (chef de travaux) at the University of Kinshasa, in the Department of Sociology of the School of Social Administrative and Political Sciences. She is a research collaborator with the Institut National de Statistique (INS), where she works on several projects. She is also an activist for the rights of women and children.

**Issa Kiemtoré** is an independent researcher based in Goma, DRC. He is an economist specialised in programme evaluation and data collection in conflict-affected contexts. He currently works for IDS on the REALISE project.

**Pierre Marion** joined IDS in 2019 working for the Conflict and Violence cluster. He is currently a Doctoral researcher. He is a PhD student in Economics at the University of Sussex. Previously, he has worked as a research analyst at the University of Oxford, in the Department of International Development (ODID), as a consultant for United Nations specialised agencies and the World Bank, and as a Teaching Assistant at the University of Sussex.

**Polepole Bazuzi Christian** is an expert rural development. He has more than ten years of experience in mixed methods academic research, across the provinces of eastern DRC. He has expertise on monitoring and evaluation of humanitarian projects, and has worked in conflict-affected areas, including on non-state armed groups. He is currently a field supervisor at Marakuja Kivu Research, and a trainer and supervisor of the Crisis Observatory Program of the World Bank.

**Margherita Bove** is an economist holding a MSc from the University of Sussex, UK. Her research interests fall into the fields of development economics and political economy. She has worked as a research officer and consultant for CER (Italy), IDS (UK), and UNU-WIDER.

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# 1. Introduction: Understanding marginalisation from education in zones of protracted violent conflict

## 1.1 Rationale of the study

### 1.1.1 Project rationale

The Democratic Republic of the Congo (DRC) has been embroiled in a violent conflict for close to 30 years. Despite the ongoing violence, the education sector has continued to operate in conflict-affected provinces, but a range of factors prevent children from receiving quality education. ‘Supply side’ factors include those that affect education throughout the country, such as chronic underfunding of the education sector (De Herdt and Titeca 2016) or prohibitively high school fees (Verhaghe 2017), which are often exacerbated in conflict-affected provinces. They also include factors specific to these provinces, such as the destruction of school infrastructure and the deliberate targeting of school staff by armed factions (Brandt 2017, 2019). ‘Demand side’ factors are equally numerous, as the economic, social and political factors hindering access to education are often exacerbated in conflict areas. Moreover, conflict-related factors such as displacement, insecurity and militarisation increase the barriers to education for children. These can be particularly acute for young girls, as the effects of violent conflict are often gender specific.

In this context, the REALISE<sup>1</sup> project is seeking to address key barriers to the education of young girls in six fragile and conflict-affected provinces of the DRC. REALISE is funded by the UK’s Foreign, Commonwealth & Development Office (FCDO) as part of the Girl’s Education Challenge and implemented by Save the Children and World Vision International. Key interventions target the cost of schooling, the lack of value attributed by households to girl’s education, low teacher capacity, and the psychosocial impact of violent conflict. The REALISE project also comprises a research component, led by the Institute of Development Studies, in partnership with Marakuja Kivu Research. This paper is one of two Working Papers that present the results of this study. It focuses on the dynamics of marginalisation from education in conflict-affected contexts.

In particular, we look at the intersection of economic, social, cultural and political, spatial, and gender marginalisation, and how these are exacerbated and changed through violent conflict.

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<sup>1</sup> *Réalisation et Épanouissement via l’Apprentissage et L’Insertion au Système Éducatif.*

### 1.1.2 Academic rationale

It is well established that armed conflict causes a decline in educational progress, an effect visible across educational outcomes, including enrolment, grade progression, years of schooling completed, drop-out rates and levels of attainment (GCPEA 2018; UNESCO 2011 Akresh and de Walque 2008; Shemyakina 2011; Chamarbagwala and Moran 2009). A new literature on education in emergency has emerged, seeking to assist policy actors and practitioners intervening in contexts of crises such as violent conflict or natural disasters. However, the ‘emergency’ or ‘crisis’ frameworks have come under criticism, particularly for the short-term assumptions underlying them (Versmesse *et al.* 2017). Many of the world’s conflict-affected regions are characterised by protracted dynamics of violence that run over decades, which cannot be fully captured by either ‘post-conflict’ nor ‘emergency’ or ‘crisis’ frameworks. In such areas, violence, displacement and militarisation have become entrenched and social, economic and political life has reorganised around them.<sup>2</sup> Understanding education provision in such contexts thus requires understanding how conflict dynamics interact with provision and access to education, and what mechanisms shape this relationship.

The literature on marginalisation from education has made substantial progress in recent years, uncovering the multiple and intersecting dimensions of marginalisation – from economic barriers, to racial discrimination, to gender. However, there remains scarce evidence on how these dynamics evolve in contexts of violent conflict. Conflict is often considered as a uniform ‘context’, masking the significant differences across and within conflict-affected areas. Indeed, conflict affected regions often display substantial geographic variation in the intensity of violence, political and social transformations, and the ways the school sector is affected by violence. As a result, different categories of the population are impacted in different ways by violence and the broader ‘dynamics of conflict’, even within a specific area. Thus, developing a more precise understanding of marginalisation from education in conflict requires opening up the ‘black box’ of conflict, and not just considering it as a background – but as an active force that shapes access to education. It requires unpacking dynamics of violent conflict and how they interact with dynamics of access to education, and understanding how they vary spatially and over time.

Of particular importance is understanding how dynamics of conflict penetrate school environments and how that affects access to education. In violent conflicts that are pitted along identity lines, different groups can have very different experiences of conflict, which condition different effects on access to education. As such, understanding the political and social positioning of these

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<sup>2</sup> The ‘triple nexus’ between humanitarianism, development and peacebuilding frameworks has become a frequently used conceptual lens to consider these interlinkages.

groups is crucial in understanding their exposure to conflict dynamics, and their changing access to education in violent contexts. At the household level, a key dimension is social networks and relationships. Indeed, the literature on education has highlighted the importance of family networks and extended social networks in conditioning access to education (Todd and Wolpin 2003; Rosenzweig and Schultz 1982; Strauss and Thomas 1995; Behrman 1988; Behrman 1997; Angelucci *et al.* 2017; La Fave and Thomas, 2017; Lowes 2018). In contexts of fragility and protracted violent conflict, inclusion in social networks can play an even more critical role in determining the material and social resources available to households, and their access to education. Moreover, the social science literature on violent conflict has increasingly focused on the ways in which social networks condition individual's and group's access to economic, political and social resources in contexts of violent conflict (Verweijen 2013), and their role in conditioning exposure to violence or recruitment by armed factions (Viterna 2006; Staniland 2015; Scacco 2009; Kalyvas 2006). Thus, understanding children's and households' social networks, social relations and wider social positioning is crucial in unpacking different dynamics of marginalisation.

## 1.2 Research objectives

The central objective of this paper is to further the understanding of marginalisation from education in contexts of protracted violent conflict. We seek to understand how different dimensions of marginalisation evolve in contexts of violent conflict, and the new forms of marginalisation that emerge as a result of violent conflict. Specifically, the study focuses on understanding how four dimensions of marginalisation from education evolve in contexts of violent conflict:

1. **Economic marginalisation.** Financial constraints are a significant barrier to children's education across low-income countries. As violent conflict deals severe economic shocks to households, it has a knock-on effect on household allocation of labour, increasing the opportunity cost of education for children. However, such shocks are highly differentiated, and affect different households in differentiated ways, which we seek to explore.
2. **Social marginalisation.** Considerable attention has been paid to economic factors, but much less to social networks and relationships. These can play a key role in conditioning access to education, and exposure to violence in contexts of violent conflict. This provides a starting point for our analysis of social marginalisation, and the role of social networks and relationships in conditioning access to education.

3. **Cultural and political marginalisation.** Specific groups can be structurally marginalised from education, particularly in countries with uneven territorial reach of the education system such as the DRC (Brandt and De Herdt 2019). Violent conflict can significantly increase the marginalisation of particular groups, which necessitates ‘unpacking’ how dynamics of conflict affect different groups.
4. **Gender marginalisation.** The literature on education in fragile contexts has shown that girls are more likely to be marginalised from education. As a result, we explore whether violent conflict increases the marginalisation of young girls, but also how gender interacts with the dimensions identified above.

### 1.3 Summary of empirical strategy

The study focuses mainly on the province of Tanganyika and secondarily on the province of Ituri (DRC). Both Tanganyika and Ituri have been affected by successive rounds of violent conflict since the 1990s. In Tanganyika, the most recent violence occurred as part of the ‘Twa –Bantu conflict’, which started in 2012 (Groleau 2017). The Twa-Bantu conflict is of particular interest because the Twa (otherwise known as Pygmies) have a very different history than the majority Bantu and have been historically marginalised from education (Vansina 1966; Minority Rights Group 2000; Klieman 2003). Focusing on the Twa allows us to explore how different dimensions of marginalisation evolved during a recent violent conflict. Ituri has been affected by successive rounds of violent conflict since the 1990s, and these conflicts have often been pitted around ethnic identity lines, in particular between the Hema and Lendu populations, allowing us to explore the effects of polarization along ethnic lines on the school environment.

We use a mixed-methods approach, combining quantitative and qualitative methods. The quantitative component of the analysis is based on a survey carried out in March and April 2019 in two territories of the province of Tanganyika, Kalemie and Kongolo. The fieldwork and interviews for the survey were carried out by Mamy Bazilu Wa Mwehu, Claude Munazi Byamungu, Freddy Koleramungu Zabandora, Jean Claude Lasai Bulaba, Moïse Bahanuzi Chikubira, Odile Faïda Bazuzi, Desire Cizungu Bazibuhe, Irene Hamuli Salome, Siméon Lukeno Bikanaba, Justine Cikwanine Masumbuko, Jose Massini Nkuena, Alice Mwangaza Aimerance, Marie Aziza Chantal, Safi Apoline Ester, Josephine Mbuyu Muma, Olivier Kalimba Mamba, Christian Mwangalalo Kavula, Ghislain Mugalu Bendera, Félix Mulindi Kakudji, Djuma Baruani, Adidja Heri. We thank them for their exceptional work.

The survey was carried out in 31 villages of the territory of Kongolo and 29 villages in of the territory of Kalemie in the province of Tanganyika, which were purposely selected to cover both rural and urban areas and ensure a sufficient

representation of the Twa population within the sample. Within each village, a total of 22 households were randomly selected after stratification on ethnicity (Twa and non-Twa) and on the households' children's gender. However, this random sampling of households was restricted to households who had at least one child in the age group 9–13 years (See Annexe 3 for a full description of sampling methodology). In total, 1,324 households were surveyed, with an equivalent number of children surveyed – 693 girls and 631 boys. A separate survey was also carried out with 'village specialists' in each of these villages, totalling an additional 60 surveys. Village specialists are key informants with specialist knowledge of a particular entity, usually state or customary authorities, civil society representatives, or civilians with in-depth knowledge of an area.

We collected data on social networks, exposure to violence, access to education, domestic and non-domestic work, and a range of other variables for 1,324 children and households. We collected rich information on household characteristics including demographics and socio-economic status (e.g., age, gender, education, religion, language, ethnicity, assets owned, occupation, income). We also collected data on kinship networks and community networks of the household (described in Section 4. Social marginalisation). Since we are interested in examining how marginalisation from education changes in protracted conflict settings, we also collected data on whether the household had experienced a violent attack and the intensity of the attack. This data was collected using recall methods, allowing us to reconstruct the household's experience of violence going back to 1990.

For our outcome variable at the child-level, we focus on the enrolment status and child's work status. The enrolment status categorises our sampled children as currently enrolled in school, was enrolled in school at some point in the past but has since dropped out, and has never been enrolled in school. For the child's work status, we asked for information on whether the child has worked in the past 12 months. This work could have been paid (in cash or kind) or unpaid. The child could be working for someone outside the household or working in a family run enterprise or the household's agricultural or non-agricultural activities, as well as carrying out domestic work for the household or another household.

Table 1.1 shows the distribution of our main outcomes. 83 per cent of our sampled children aged 9-13 years are currently enrolled in school, 7.6 per cent have never been to school, and 9.7 per cent have dropped out of school. 25 per cent of our sampled children have worked in the past 12 months.

**Table 1.1 Distribution of enrolment status and work status of sampled child**

	<b>N</b>	<b>%</b>
Outcome 1: Enrolment status		
Child has never enrolled in school	100	7.6%
Child is currently enrolled in school	1,096	82.8%
Child has dropped out from school	128	9.7%
<b>Total</b>	<b>1,324</b>	<b>100%</b>
Outcome 2: Work status		
Child has worked in the past 12 months	332	25%
Child has not worked in the past 12 months	992	75%
<b>Total</b>	<b>1,324</b>	<b>100%</b>

The qualitative component of the analysis is based on interviews and focus groups carried out between March and June 2019, mainly by Eustache Kulumbwa and Olga Kithumbu. A total of 104 interviews were carried out, 74 in the province of Tanganyika over a period of three months, and 30 in Ituri over a period of three weeks. The interviews were carried out with Key Informants, chosen for their specialist knowledge of the study's topics: Civilian and military authorities, education specialists – teachers and administrators both from state and confessional schools – parents of schoolchildren and schoolchildren. The majority of interviews were individual, semi-structured interviews. The interviews covered the history of violent conflict, the impact of the conflict on the education sector, the impact of violent conflict on families and social organisation and the socio-emotional well-being of children and students. A detailed description of the qualitative methodology can be found in Annexe 3.

The data collection instruments – the survey questionnaires and qualitative study questionnaire, Annexe 3B and Annexe 3C – can be provided upon request. All Tables and Figures presented in this Working Paper and its Annexes are the authors' own.

## 1.4 Ethics

The study was submitted, reviewed and authorised by the IDS Ethics Committee (authorisation date: 24th of July 2018), as well as by the *Comite National d'Ethique de la Sante* (CNES) of the Democratic Republic of the Congo (authorisation date: 23rd of January 2019). In addition, the team in charge of the training of researchers for the qualitative and quantitative data collections (Gauthier Marchais, Paulin Bazuzi, Aimable Amani Lameke and Eustache Kulumbwa) received a child protection briefing, at the Save the Children office in

Goma on the 4th of March 2019. The principles and instructions of this briefing were then incorporated into the training of the project researchers which took place on the week of the 4th of March 2019 in Kalemie, during two half-day sessions dedicated specifically to ethics and child protection. The ethics applications and authorisations can be provided on request.

## 1.5 The *Gratuité* policy and its effects on the programme and research agenda

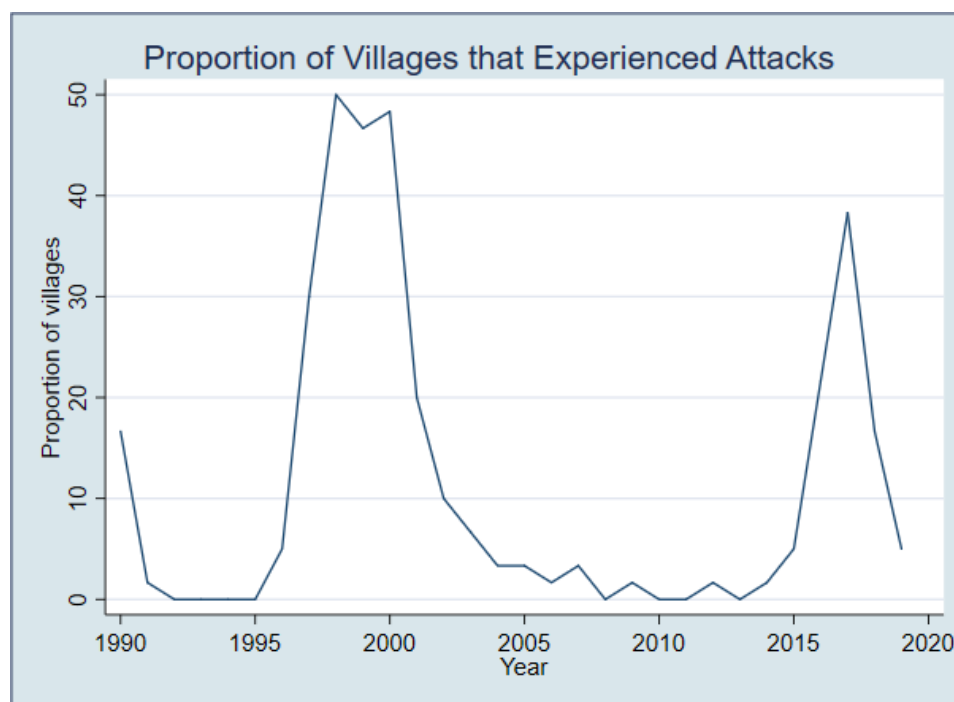
In September 2019, the Congolese Government started implementing a new nationwide policy aiming to provide free access to primary schools, commonly referred to as *Gratuité*. The policy has been rolled out across the DRC. The *Gratuité* policy has had wide-ranging effects on the Congolese education sector. Many effects are still unknown, given how recent the policy is. Preliminary analyses and reports from the field have reported significant increases in the number of students in classrooms and resulting difficulties for schools and teachers to accommodate and provide quality education. Teachers have been frustrated about implemented salary zones that discriminate against rural teachers and about the fact that non-registered teachers receive no income. Teachers in some regions went on strikes. As it significantly reduced the cost of access to schools, the *Gratuité* policy has partially removed one of the central barriers of access to education, school fees, which a central axis of analysis of this research project. However, given that the research project took place before the policy was implemented, we were not able to incorporate an analysis of the effects of the policy on the education sector. As a result, the analysis and conclusions drawn with regards to economic marginalisation in this Working Paper pertain to the situation before the implementation of the *Gratuité* policy. However, given how recent the policy is, and given that it is unclear to what extent it will be fully implemented, this does not entail that all the conclusions drawn with regards to economic marginalisation in this Working Paper are obsolete. Even if the policy is fully implemented across the DRC, other factors of economic marginalisation will continue to play a role in shaping access to education. In light of these changes, this paper has been reviewed, in order to highlight and discuss the results and programme related issues that are likely to have been altered by *Gratuité* policy.

## 2. Analysing dimensions of marginalisation from education in war

The violent conflict that has shaken the DRC since the 1990s has had wide ranging and deeply destructive effects on the education sector, including in the two provinces on which this study focuses, Tanganyika (centrally) and Ituri. Interviews carried out for this study attest of assassinated teachers and students, school closures, abandoned schools, destroyed schools, displaced schools, stolen or burned material. All armed groups mentioned in the interviews were accused of looting schools and setting them on fire (e.g. Int. 20, head teacher, 12.04.19; Int. 29, Sous-Proved, 22.04.19). As a customary leader put it: “If you destroy a school, loot, steal, this means that you do not care about education.” (Int. 9).

While our study does not cover all aspects of the effects of conflict on education, our empirical approach allows us to explore the effects of conflict on specific dynamics of marginalisation from education. The survey was carried out in the territory of Kalemie in the province of Tanganyika, which has recently been exposed to the Twa-Bantu conflict, and the territory of Kongolo, which has not experienced the Twa-Bantu conflict. This allows us to carry out comparisons between conflict-affected areas, and areas not directly affected by conflict. Furthermore, the temporal dimension of the data collected on attacks allows us to compare the effects of exposure to violence over time, including within conflict-affected areas (see Annexe 3 for more detail). Figure 2.1 shows the proportion of the 60 villages in our sample that have experienced violent attacks, over time, and Figure 2.2 shows the proportion of households that experienced violent attacks in our sample, over time. As can be seen, both graphs display peaks during the First and Second Congolese war (1997-2003), and during the Twa Bantu conflict, which peaked in the territory of Kalemie in 2016-2017.

**Figure 2.1 Distribution of violent attacks between 1990 and 2019 in villages**



**Figure 2.2 Distribution of violent attacks between 1990 and 2019 at household level**

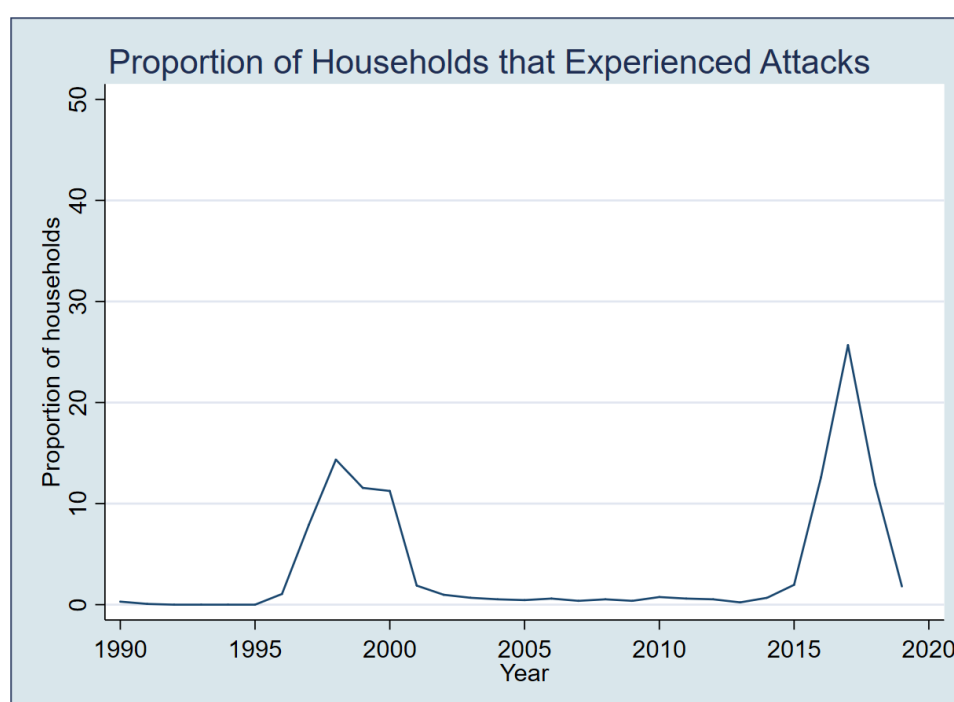


Table 2.1 reports the results of OLS regression of experience of conflict by a household on the child's enrolment status. The estimated regression is –

$$Y_{ij} = \beta_0 + \beta_1 Violence_{ij} + \beta_2 X_{ij} + \beta_3 HH_{ij} + \eta + u_{ij}$$

Where  $Y_{ij}$  is a binary variable which takes the value of 1 if child  $i$  of household  $j$  has ever been enrolled in school and 0 if the child has never been enrolled in school,  $Violence$  is a binary variable which takes the value of 1 if the household has ever experienced an attack and 0 otherwise,  $X_{ij}$  captures child characteristics such as age and gender,  $HH_{ij}$  captures household characteristics such as the language spoken, ethnicity, assets,<sup>3</sup> income, land ownership, and number of household members,  $\eta$  is the village fixed effects, so that village characteristics such as location, size etc. are accounted for. The standard errors are clustered at the village and children's age group level to account for the sampling strategy which non-randomly selected the villages and restricted household selection to children in the age groups of 9-13 years.

We find that while experiencing a violent attack has a negative effect on enrolment in school, it is only statistically significant for more recent attacks.<sup>4</sup> Additionally, the more recent the attack, the stronger the negative effect on enrolment. Thus, a household which experienced an attack after the child was 6 years of age is 2.8 percentage points less likely to enrol the child in school. These results confirm what the literature on conflict and education has empirically established: That violent conflict has a negative effect on education. While this result is not surprising, our objective in this study is to explore the mechanisms and factors that explain it.

We explore four key dimensions of marginalisation from education, and how they play out in contexts of protracted violent conflict: Economic marginalisation, social marginalisation, cultural/political marginalisation, and gender. While these four dimensions of marginalisation are well established in the literature, there is limited evidence on how they evolve in contexts of protracted violent conflict. To do so, we 'unpack' dynamics of violent conflict, look at how they interact with these dimensions of marginalisation.

<sup>3</sup> The full list of assets and housing characteristics included in the index is as follows. Ownership of: land-plot where the house is built; bicycle; motorcycle; minor appliances; refrigerator; television; DVD, CD player; computer; washing machine; cell-phone; roof made of grass or similar materials; roof made of iron sheets or similar materials; walls made of mud or similar materials; walls made of baked bricks or similar materials; private toilet; public or outdoor toilet; access to piped or bottled water; access to rain or surface water; electricity from sector; electricity from solar panel or generator; no access to electricity. Durable assets in very low frequencies and hence excluded: car, stove or oven.

<sup>4</sup> In Annexe 4, Table A4.1, we report the results of the regression of experiencing a violent attack on the probability of child working and do not find similar trends.

## Table 2.1 Regression results of effect of violence on enrolment

VARIABLES	(1) Child has ever attended school (vs never enrolled)	(2) Child has ever attended school (vs never enrolled)	(3) Child has ever attended school (vs never enrolled)
Household has ever experienced violent attack since 1990	-0.023 (0.015)		
Household has experienced violent attacks since the child was born		-0.023 (0.016)	
Household has experienced violent attacks since the child was 6 years old			-0.028* (0.017)
Sampled child's age	0.011** (0.004)	0.011** (0.004)	0.011** (0.004)
Sampled child is a girl	-0.020 (0.013)	-0.020 (0.013)	-0.019 (0.013)
Number of household members	0.003 (0.002)	0.003 (0.002)	0.003 (0.002)
Main language: Swahili	0.084*** (0.022)	0.082*** (0.022)	0.082*** (0.022)
Main language: South Kivu language	0.111* (0.057)	0.107* (0.056)	0.107* (0.056)
HH head is Twa	-0.194*** (0.042)	-0.195*** (0.042)	-0.195*** (0.042)
Asset index	0.011*** (0.003)	0.010*** (0.003)	0.010*** (0.003)
Household monthly mean income in last 12 months (in 1000's of CDF)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)
Number of land-plots owned	0.005 (0.005)	0.005 (0.005)	0.005 (0.005)
Constant	0.762*** (0.055)	0.760*** (0.055)	0.761*** (0.054)
Village Fixed effects	Yes	Yes	Yes
Observations	1,324	1,324	1,324
R-squared	0.266	0.266	0.266

Note: This table shows the effects of conflict on probability of child enrolment versus never having enrolled in school as estimated by OLS regression. Column 1 looks at the effect of conflict since 1990, Column 2 looks at conflict since child was born, Column 3 looks at conflict since child was 6 years old. Standard errors clustered at the village and children's age group level. \*, \*\*, \*\*\* denotes significant at 10, 5, and 1 per cent respectively.

### 3. Economic marginalisation: Poverty, school fees and violent conflict

#### 3.1 Rationale

The literature on marginalisation from education has long established that financial constraints represent one of the most significant barriers to children's education across low-income countries (Glewwe 2013; Shemyakina 2011; Justino 2016; Jacoby and Skoufias 1997; Rodriguez and Sanchez 2009). As violent conflicts often inflict significant negative income shocks to households, financial barriers to education can sharply increase through a range of mechanisms, ranging from increased cost of transport (Jamal 2016) to household reallocation of labour (Akresh and De Walque 2008; Shemyakina 2006; Pereznieto *et al.* 2017; Alam *et al.* 2016; Roy and Singh 2016; Salem 2018; Pereznieto *et al.* 2017; UNESCO 2011). (See Annexe 2 for a detailed discussion of the literature).

In the DRC, parents have effectively financed the lion's share of the education system until the implementation of the *Gratuité* policy in 2019. In 1992, in the midst of a major socio-economic crisis, the Congolese (Zairian) government was unable to pay teacher salaries and teachers went on a strike. Households began paying teachers a monthly salary supplement, the 'motivation fee'. Gradually, they also began co-funding the entire administrative apparatus. The fees have continued to exist despite the announcement in 2010 of a gradual rollout of constitutionally guaranteed free primary schooling. As discussed in the introduction, the 2019 *Gratuité* policy seeks to achieve the same objective, but it is still too early to assess how successful the policy has been in achieving it. For 2015, Verhaghe (2017) calculates that households funded USD 843.1 million while the executed government budget amounted to USD 535.9 million (DRC/Ministère du Budget 2017). Across the country there were approximately 130 types of school fees in 2017 (Verhaghe 2017). Fees vary significantly across and within provinces. Furthermore, fees can create a tense atmosphere between teachers and parents and teachers might accept high numbers of students in their classes. Many students pay irregularly and incompletely, and payment is enforced through a range of methods – from peer pressure, to the ejection of students from schools, to physical coercion (Verhage 2017). These are likely to be exacerbated in contexts of violent conflict, and there is extensive anecdotal evidence to support this – but little systematic empirical evidence. A recent study of violence against schoolgirls in the DRC noted that financial constraints were

the primary reason advanced by respondents to explain girls' temporary or permanent absence from school (Landis *et al.* 2018 p.14).

## 3.2 Analysis

Our analysis, undertaken before the *Gratuité* policy of September 2019, provides further evidence that financial barriers are a significant factor constraining access to education. Table 3.1 and Figure 3.1 show the range of school related costs that households faced in the survey areas. These do not represent the full range of costs associated to schooling<sup>5</sup>, but the bulk of the main expenses. The average expenditure reported by households whose children are currently enrolled in school is USD 19.00 for the academic year 2018-2019 (See Annexe 4 Table A4.2 for a detailed breakdown of the expenditure categories).

Verhaghe (2017) found that in the first five years of primary schooling, teacher salary top-ups correspond to 90 per cent of total fees; in the final year of primary schooling, they vary between 65 per cent in urban areas and 50 per cent in rural areas. In secondary schools, they constitute half of the total school fee costs. However, we find that, while expenditure on teacher incentives accounted for the highest share, it was lower than reported in the Verhaghe (2017) study, at 33 per cent of the total spending on school. This could be in part due to the selection of our sample – we sampled villages with Twa population, which also are poorer and reportedly sometimes exempted from school fees.

On average, a typical household in our sample has 5 children in the school going age. Thus, a typical household might end up spending almost USD 100.00 per year on education related expenses (or 25 per cent of the GDP per capita).<sup>6</sup> While the *Gratuité* policy formally abolished school fees, it remains to be seen whether the policy will be fully implemented across the Congolese territory. Currently, teacher-student-ratios have increased significantly and many more teachers and classrooms are needed. If the government is unable to recruit and pay new teachers and register and pay teachers already working, parents might again decide to step in and recruit teachers locally, with the goal of lowering the number of students per classroom.

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<sup>5</sup> This is due to the fact that the recording of school fees is constrained by the pre-established list of schooling expenses of the survey. The list was elaborated with education sector actors in Tanganyika, and the survey also comprises an 'other' category.

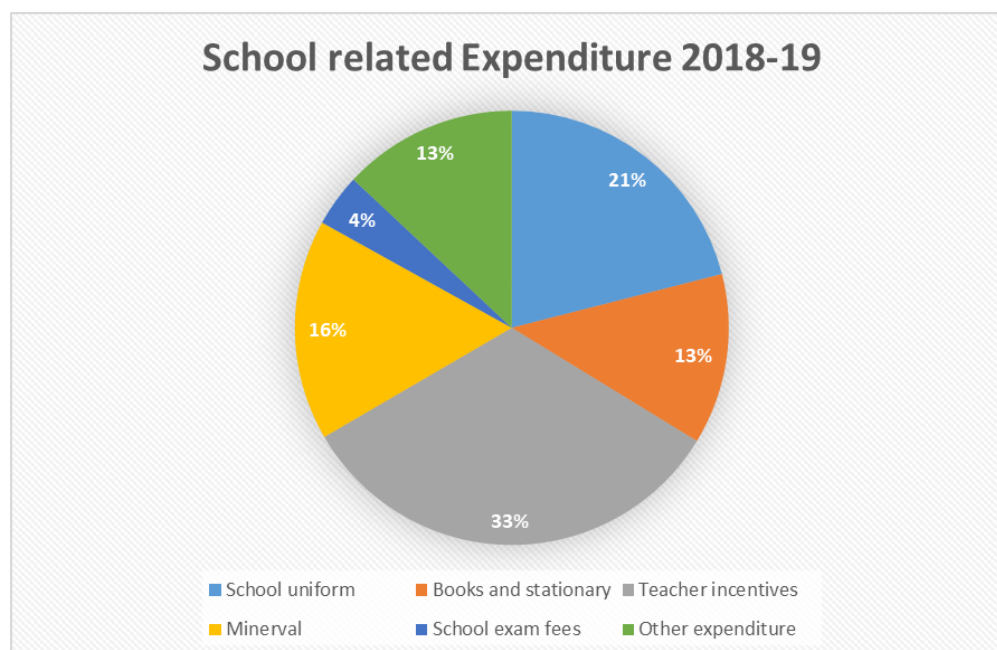
<sup>6</sup> The GDP per capita was estimated at US\$418 by the **World Bank** in 2018.

**Table 3.1 Average school related expenditure for 2018–19**

Expenditure in academic year 2018–19	Mean US\$
Teacher incentives	6.54
School uniform	4.18
Minerval	3.27
Books and stationery	2.53
School exam fees	0.78
Other expenditure	2.59
Total education related expenses in 2019	18.88
<b>N</b>	<b>1,096</b>

Notes: The table reports the school expenditure for all currently enrolled children, i.e. 1,096 out of 1,324. Column 1 reports the average expenditure in CDF. Column 2 reports the average expenditure in US\$, where 1 CDF = US\$0.0006. The expenditure is reported for the school year 2018–19. Other expenditure includes expenditure on school meals, maintenance, in-school tutoring, operation costs, insurance, school promotion fees, inspection costs.

**Figure 3.1 Distribution of school related expenditure for 2018**



The school related expenditure can make it difficult for poorer households to enrol their children in school. It may also increase the likelihood of children working. In Table 3.2, we report the average of some of the proxies of economic status by the child's enrolment status. Children who are currently enrolled come

from considerably wealthier families with more assets, a monthly mean income of 67331 CDF (double the income of those households whose children have never been enrolled or dropped out), and marginally more land ownership.<sup>7</sup>

**Table 3.2 Average economic status by enrolment status**

Variable	(1) Never attended school Mean	(2) Dropped out Mean	(3) Currently enrolled Mean
Asset index	-1.090	-0.534	0.162
Household monthly mean income in last 12 months (1000's CDF)	34.303	31.508	67.331
Number of land-plots owned	1.370	1.336	1.968
<b>N</b>	<b>100</b>	<b>128</b>	<b>1,096</b>

Notes: Column 1 shows the averages for children who have never been enrolled in school. Column 2 shows the averages for children who have dropped out of school. Column 3 shows averages for children who are currently enrolled in school. The full list of assets and housing characteristics included in the index is as follows. Ownership of: land-plot where the house is built; bicycle; motorcycle; minor appliances; refrigerator; television; DVD, CD player; computer; washing machine; cell-phone; roof made of grass or similar materials; roof made of iron sheets or similar materials; walls made of mud or similar materials; walls made of baked bricks or similar materials; private toilet; public or outdoor toilet; access to piped or bottled water; access to rain or surface water; electricity from sector; electricity from solar panel or generator; no access to electricity. Durable assets in very low frequencies and hence excluded: car, stove or oven.

Looking at the economic status of households by whether the child is engaged in work or not (Table 3.3), we also find that, on average, the households where children work are poorer, owning fewer assets, having lower monthly earnings and owning fewer land-plots. However, in a regression analysis with controls and village fixed effects, the effect of economic status is no longer significant (reported in Annexe 4 Table A4.3); and while, the household income remains significant in an regression analysis, the effect size is very small to have any meaningful interpretation.

<sup>7</sup> However, the effect of economic variables is not always large or significant in a regression analysis with full set of controls and village fixed effects. The asset index remains a strong and significant predictor of enrolment and continuing in school. See Annexe 4, Table A4.3.

**Table 3.3 Average economic status by child's work status**

<b>Variable</b>	<b>(1) Child does not work Mean</b>	<b>(2) Child works Mean</b>
Asset index	0.013	-0.040
Household monthly mean income in last 12 months (1000's CDF)	65.029	50.447
Number of land-plots owned	1.945	1.614
<b>N</b>	<b>992</b>	<b>332</b>

Notes: Column 1 shows the averages for children who do not work. Column 2 shows the averages for children who work. The full list of assets and housing characteristics included in the index is as follows. Ownership of: land-plot where the house is built; bicycle; motorcycle; minor appliances; refrigerator; television; DVD, CD player; computer; washing machine; cell-phone; roof made of grass or similar materials; roof made of iron sheets or similar materials; walls made of mud or similar materials; walls made of baked bricks or similar materials; private toilet; public or outdoor toilet; access to piped or bottled water; access to rain or surface water; electricity from sector; electricity from solar panel or generator; no access to electricity. Durable assets in very low frequencies and hence excluded: car, stove or oven.

The qualitative interviews support these results, as lack of financial means and high schooling costs are consistently presented as barriers to sending children to school in Tanganyika and Ituri, and the economic effects of violent conflict on households as a significantly enhancing factor. A school parent at a primary school in TabaCongo explains that “the conflict paralysed everything, parents lost all their goods... It is becoming difficult for them pay school fees.” (Int. 29). This reportedly holds true for IDP and non-IDP (Int. 29). Someone else said that “after the conflict nothing is working, life is slowly returning, we still need to take care of the fields that were destroyed and be patient ... but in the meantime, famine dominates the villages.” (Int. 9).

In the DRC, school fees are frequently enforced, in particular through the expelling of students from schools when their parents are unable to pay. Interviews differ with regards to the practice of expelling. For example, a Catholic administrator (Int. 1, 02.04.19) stated that children whose parents were unable to pay school fees were expelled. In contrast, a head teacher from Nyunzu stated that: “We didn’t expel students, we worked four months without asking for fees.” (Int. 43, 01.05.19; see also Int. 1, 17). Similarly, a teacher said that “students studied for free during two years of the conflict” (Int. 40, teacher, 26.04.19). These quotes point to a wider set of initiatives seeking to alleviate the financial constraints on schooling, at least temporarily, during the periods of intense hardship. Among the most common ones is the temporary reduction or cancellation of the teacher top-up / motivation fees, as a result of the crisis: “Some parents slept under Mango trees, they transported sand for others to

make some money, can you ask these parents to pay school fees?" (Int. 20, Head teacher in TabaCongo, 12.04.19; see also Int. 44). As a case in point, some internally displaced families were unable to pay a comparatively low monthly sum of 700 FC (Int. 43, head teacher, 01.05.19). One respondent stated the following: "non-paid teachers suffer enormously as parents pay the motivation fee with great difficulties; the situation is really catastrophic." (Int. 29) Further interviews with non-education actors confirmed such efforts made by teachers and school staff to temporarily offset the negative effects of the violent conflict: "Teachers worked for free, without asking for fees." (Int. 30, civil society leader, 23.04.19). "These situations, however, seem to have appeared on an ad-hoc basis, rather than as an established practice.

Given that parents have funded teachers before the announcement of the *Gratuité* policy in September 2019, the reduction or abolishment of school fees, even temporarily, could generate a complex situation. Due to households' reduced income, teachers were indirectly affected by the negative income shock of the violent conflict. Consequently, teachers' salaries become even lower than they already were without conflict-induced shocks. This is likely to be particularly true for schools with high number of non-paid teachers (i.e. not paid by the government) who are likely to suffer more when parents are unable to pay the motivation fees, as teachers are completely unpaid (e.g. Int. 17). These schools might continue to be negatively affected by income shocks even after *Gratuité*, as long as non-paid teachers are not added to the government's payroll, a process that has not been finalised as of March 2020. Although we do not have evidence for this in the study, it is likely that this enhances the negative effects of the conflict on teachers, such as absenteeism, tensions between head teachers and teachers, tensions in the classroom, etc. Indeed, as salaries are an important motivation for remaining in the teaching profession, lower income is likely to demotivate teachers even more, which can increase teacher turnover. This turnover can in turn negatively impact interventions in the field of teacher professional development. When schools are unable to retain trained teachers, investments in their professional development might not be sustainable.

While we find evidence that economic marginalisation is a significant barrier to education, it is important not to overstate its importance. As we will seek to show in the following sections, economic marginalisation intersects closely with other dimensions of marginalisation, and displays significant geographical and social, political and cultural variation. That is, addressing economic barriers to education is a necessary, but not sufficient condition of addressing marginalisation from education in war. As a caretaker of an orphan underlines that the NGO "can pay [fees] for her but if other aspects don't work, she can still abandon school... as there are other important aspects that come up when you go to school." (Int. 25, Ituri).

## 4. Social marginalisation

### 4.1 Rationale

In the previous section, we have found evidence that financial constraints represent a significant barrier to education, and that violent conflict increases the economic marginalisation from schools of poor population. Economic marginalisation, however, is not the sole nor necessarily the most important dimension of marginalisation. In this section, we turn to social marginalisation. Social marginalisation is intricately tied to economic marginalisation, particularly in societies where economic activity is embedded in social relations (Meagher 2010). Belonging to particular social networks (in particular lineage groups), or developing and cultivating social relationships can condition access to economic, social and political resources, which can have an influence on access to education, and educational outcomes. Moreover, the literature on violent conflict has shown that social networks condition exposures to different dynamics of violent conflict – from direct exposure to violence, to recruitment by armed factions, and exposure to exploitative industries and forms of labour that emerge in conflict-affected contexts (see Annexe 2 for a review of the literature).

### 4.2 Analysis

In the survey, we collected simple measures of social support networks, using name generator and name interpreter type questions to generate ‘ego-networks’,<sup>8</sup> a standard method in the literature (Merluzzi and Burt 2013; Marin and Hampton 2007; Pescosolido and Borgatti 2018). As we did not collect data on alter-alter ties (or adjacency matrices),<sup>9</sup> we do not carry out structural or positional analysis network analysis, and instead focus on measuring the size, strength, and attributes of ego-networks.

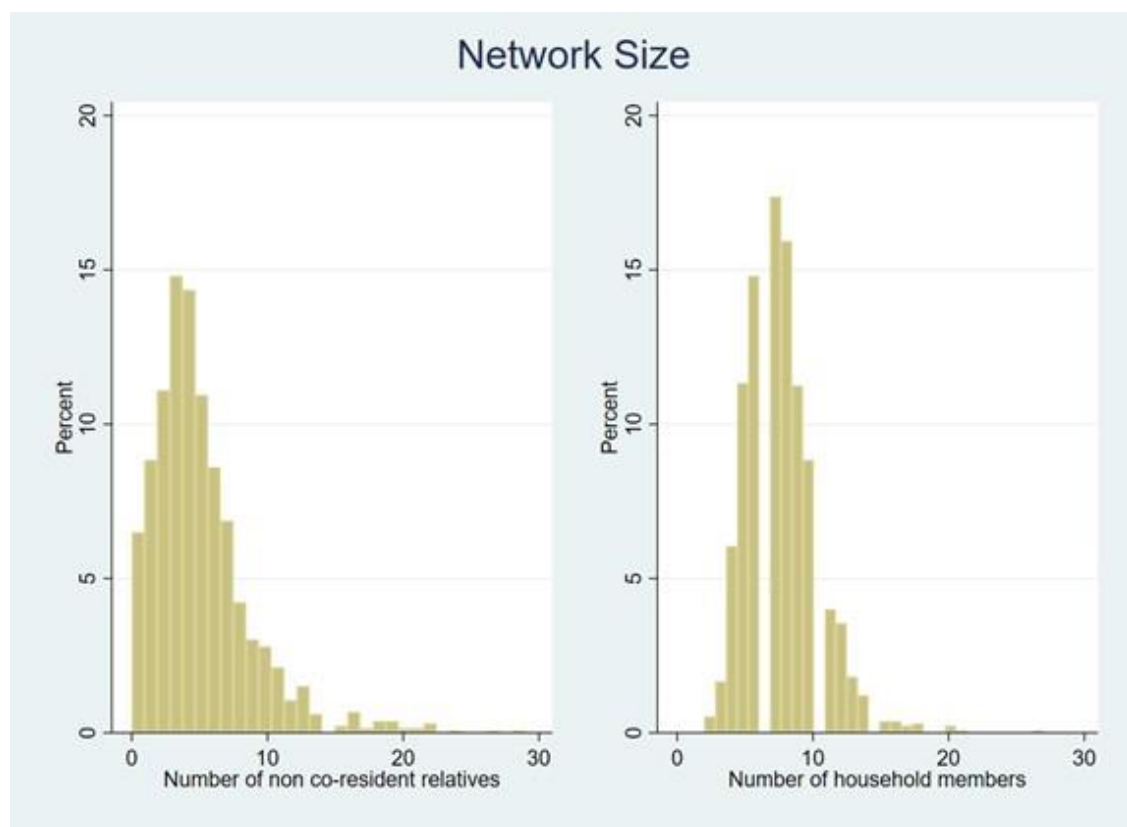
We collected data on the number of relatives that a household has – either living in the household itself or outside but in close proximity. Figure 4.1 shows the per cent of households and the number of non co-resident relatives and co-resident relatives (household members).

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<sup>8</sup> An ego-network is the network around a particular individual, the ‘ego’, which connects her/him to other individuals, the ‘alters’.

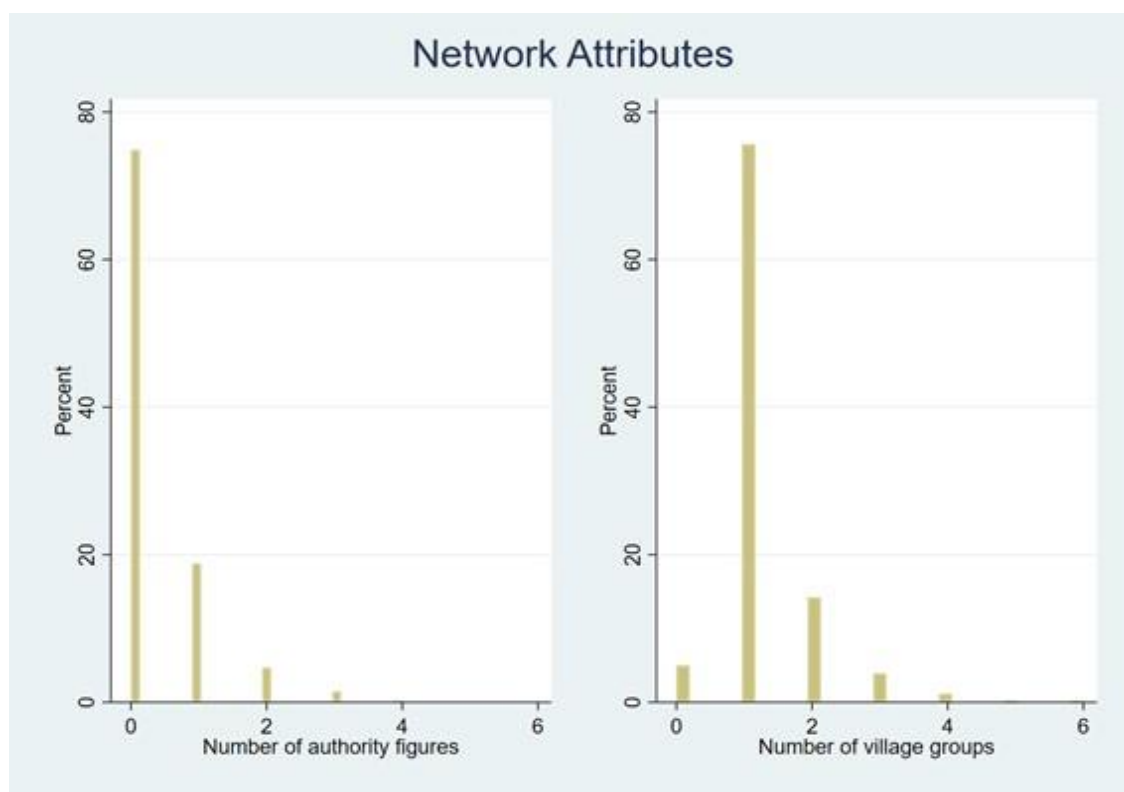
<sup>9</sup> Alter-alter ties are the connections (or absence of connections) between alters that a particular ego is connected to. Collecting data on alter-alter ties allows to know, for example, whether two acquaintances of a particular ego know each other. Progressively, this allows to draw a larger social network, of which the individual is just a point (node). This in turn allows to carry analysis on the structure of the network (structural analysis), and the position of the individual (ego) within the network (positional analysis).

**Figure 4.1 Distribution of network size by per cent of households**



We also collected data on household's social ties with a range of authorities: Political leaders, State authorities; Customary authorities (which often wield considerable power, particularly when they are custodians of the land); Military authorities and Religious leaders. As can be seen in Figure 4.2, almost 75 per cent of our sample do not know anyone in position of authority. Additionally, we collected data on membership in various groups organised at the village-level, such as, religious groups, women's groups, savings' groups, ethnic associations, school and parents' association. Almost 75 per cent of our sample are part of at least one village groups, and this is usually a religious group.

**Figure 4.2 Distribution of Network attributes by per cent of households**



Looking at the effect of social networks on our outcomes, Table 4.1 reports the distribution of our social network variables by child's enrolment status. We find that children who are currently enrolled, on average, have a larger network of non co-resident relatives. The average proportion of households who report knowing an authority figure is low (see Table 4.1 – 9% for never enrolled; 23% for dropouts; and 27% for currently enrolled). Only 9 per cent of households know someone in authority for children who have never been enrolled in school. The corresponding figure is three times higher for children who are currently enrolled. Similarly, children currently enrolled come from households who are more involved in village-based groups.<sup>10</sup>

<sup>10</sup> From an OLS regression analysis with controls and village fixed effects (See Annexe 4 Table A4.4), we don't find any significant effect of the network of non co-resident relatives on enrolment. However, the number of authority figures in the household's network and membership of village groups is significantly and positively associated with the likelihood of the child ever being enrolled in school.

**Table 4.1 Average of network characteristics by enrolment status**

Variable	(1) Never attended school Mean	(2) Dropped out Mean	(3) Currently enrolled Mean
Number of non co-resident relatives	3.650	4.117	5.107
Number of household members	6.670	6.953	7.890
Proportion of households knowing at least 1 authority figure	0.090	0.227	0.269
Number of groups in the village the household is member of	1.000	1.109	1.243
<b>N</b>	<b>100</b>	<b>128</b>	<b>1,096</b>

Table 4.2 reports the average of the network variables by child's working status. The difference in the network variables by child's working status is very marginal and not statistically significant (also see Annexe 4 Table A4.4).

**Table 4.2 Average of network characteristics by child's work status**

Variable	(1) Child does not work Mean	(2) Child works Mean
Number of non co-resident relatives	4.987	4.645
Number of household members	7.766	7.530
Proportion of households knowing at least 1 authority figure	0.255	0.241
Number of groups in the village the household is member of	1.188	1.283
<b>N</b>	<b>992</b>	<b>332</b>

Given our findings that the network of authority figures and village groups is positively associated with enrolment in school, we explore attributes of these networks. Focusing on the correlation between authority figures and whether a child has ever been enrolled at school, we estimated an OLS regression as –

$$Y_{ij} = \beta_0 + \beta_1 Network_{ij} + \beta_2 X_{ij} + \beta_3 HH_{ij} + \beta_4 Violence_{ij} + \eta + u_{ij}$$

Where  $Y_{ij}$  is a binary variable which takes the value of 1 if child  $i$  of household  $j$  has ever been enrolled in school and 0 if the child has never been enrolled in school;  $Network$  is a vector of variables which capture the number of household members, the number of non co-resident relatives of the household, the household knows a political leader, state leader, religious leader, customary leader, and military leader, membership of village groups, if the household is part of patrilineal or matrilineal kinships systems, if the household belongs to the same lineage as that of Mwami, head of the groupement, and head of the village;  $X_{ij}$  captures child characteristics such as age and gender;  $HH_{ij}$  captures household characteristics such as the language spoken, ethnicity, assets, income, and land ownership;  $Violence$  is a binary variable which takes the value of 1 if the household has experienced a violent attack since the child was 6 years of age or 0 otherwise;  $\eta$  is the village fixed effects, so that village characteristics such as location, size etc. are accounted for. The standard errors are clustered at the village and children's age group level to account for the sampling strategy which non-randomly selected the villages and restricted household selection to children in the age groups of 9-13 years. Table 4.3 reports the results of this regression. Among the authority figures, we find that knowing a state leader or a religious leader is positively correlated with the child being enrolled at school. Knowing a state leader increases the probability of a child aged 9-13 years old to be enrolled by 5 percentage points; while knowing a religious leader increases the probability by 3.6 percentage points.

Similarly, we investigate the attributes of the village groups using an OLS regression as

$$Y_{ij} = \beta_0 + \beta_1 Network_{ij} + \beta_2 X_{ij} + \beta_3 HH_{ij} + \beta_4 Violence_{ij} + \eta + u_{ij}$$

Where  $Y_{ij}$  is a binary variable which takes the value of 1 if child  $i$  of household  $j$  has ever been enrolled in school and 0 if the child has never been enrolled in school;  $Network$  is a vector of variables which capture the number of household members, the number of non co-resident relatives of the household, the number of authority figures known to the household, membership of specific village groups – women, religious, savings, school parents, and ethnic, if the household is part of patrilineal or matrilineal kinships systems, if the household belongs to the same lineage as that of Mwami, head of the groupement, and head of the village;  $X_{ij}$  captures child characteristics such as age and gender;  $HH_{ij}$  captures household characteristics such as the language spoken, ethnicity, assets, income, and land ownership;  $Violence$  is a binary variable which takes the value of 1 if the household has experienced a violent attack since the child was 6 years of age or 0 otherwise;  $\eta$  is the village fixed effects, so that village characteristics such as location, size etc. are accounted for. The standard errors are clustered at the village and children's age group level to account for the sampling strategy which non-randomly selected the villages and restricted household selection to children in the age groups of 9-13 years.

**Table 4.3 Regression results of authority figures and enrolment**

<b>VARIABLES</b>	<b>(1) Child has ever attended school (vs never enrolled)</b>
Number of non co-resident relatives	0.001 (0.002)
Number of household members	0.002 (0.002)
Household knows a Political Leader	-0.013 (0.023)
Household knows a State Leader	0.049* (0.027)
Household knows a Customary Authority	-0.011 (0.021)
Household knows a Religious Leader	0.036** (0.015)
Household knows a Military Leader	-0.011 (0.032)
Number of groups in the village the household is member of	0.028*** (0.009)
Patrilineal kinship system	0.029 (0.029)
Household part of a Mwami's lineage	-0.016 (0.019)
Household part of a Chef de Groupement's lineage	0.011 (0.019)
Household part of a Chef de Village's lineage	0.002 (0.018)
Household Controls added	Yes
Village fixed effects	Yes
Observations	1,324
R-squared	0.275

Note: This table shows the effects of social networks on probability of child enrolment versus never having enrolled in school. Standard errors clustered at village and children's age group level. Controls included are child's age, gender of the child, language spoken, ethnicity, asset index, household monthly income, number of land-plots owned, if the household experienced a violent attack since the child was 6 years of age. \*, \*\*, \*\*\* denotes significant at 10, 5, and 1 per cent respectively.

Table 4.4 (below) reports the results of this regression. Among membership of groups in the village, we find that a household that is part of a savings' group increases the probability of the child to enrol in school by 3.5 percentage points. Being part of school parents' association increases the likelihood of a child aged 9-13 years to enrol by 3.5 percentage points.

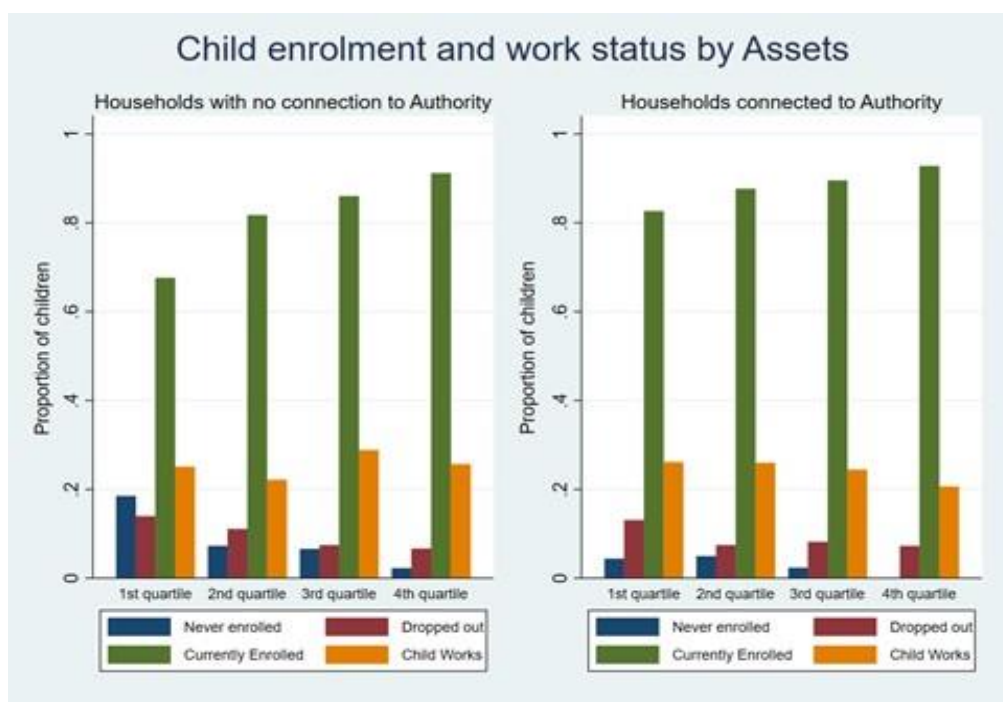
Social networks, in particular knowing someone in positions of authority and being active in village-based groups, are conducive to higher enrolment rates as well as staying enrolled in school. They can also serve as a mitigating factor from the economic marginalisation discussed in the previous section. In Figure 4.3 below, we look at our outcomes in households from the poorest to richest quartile of asset index by whether these households know any authority figure (for precise numbers in each category see Annexe 4 Table A4.5). For every quartile of asset index, the proportion of children currently enrolled is higher if the household knows someone in position of authority. The difference is starkest for the poorest households in the first and second quartile.

**Table 4.4 Regression results of village groups and enrolment**

VARIABLES	(1) Child has ever attended school (vs never enrolled)
Number of non co-resident relatives	0.002 (0.002)
Number of household members	0.003 (0.002)
Number of authority figures that the household knows	0.014* (0.009)
Household is part of Women's group in the village	0.041 (0.025)
Household is part of Savings' group in the village	0.035*** (0.013)
Household is part of Religious group in the village	0.022 (0.017)
Household is part of School Parents' Association	0.035** (0.018)
Household is part of an ethnic Association	0.018 (0.026)
Patrilineal kinship system	0.026 (0.029)
Household is part of a Mwami's lineage	-0.018 (0.020)
Household is part of a Chef de Groupement's lineage	0.009 (0.020)
Household is part of a Chef de Village's lineage	0.002 (0.017)
Household controls added	Yes
Village Fixed effects	Yes
Observations	1,324
R-squared	0.274

Note: This table shows the effects of social networks on probability of child enrolment versus never having enrolled in school. Standard errors clustered at village and children's age group level. Controls included are child's age, gender of the child, language spoken, ethnicity, asset index, household monthly income, number of land-plots owned, if the household experienced a violent attack since the child was 6 years of age. \*, \*\*, \*\*\* denotes significant at 10, 5, and 1 per cent respectively.

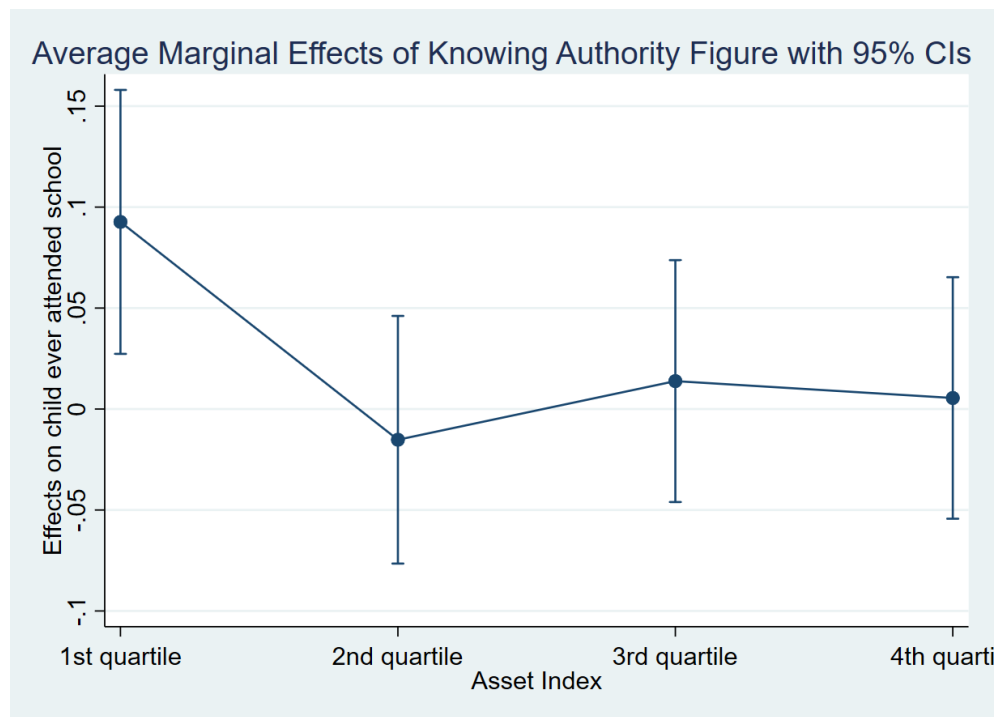
**Figure 4.3 Assets, authority figures and outcomes of interest**



The role of authority figures in alleviating the economic disadvantage is robust to regression analysis with a full set of controls and village fixed effects.<sup>11</sup> Figure 4.4 reports the results of the regression graphically, illustrating that connection to an authority figure is most beneficial for a poor household. Knowing someone in a position of authority increases the likelihood that a child will enrol in school by almost 10 percentage points for the poorest (1st quartile) households. This result is statistically significant.

<sup>11</sup> Figure 4.4 reports the average marginal effects ( $\beta_3 + \beta_1$ ) of the OLS regression -  $Y_{ij} = \beta_0 + \beta_1 \text{Knowing at least 1 authority figure}_{ij} + \beta_2 \text{Asset Index Quartiles}_{ij} + \beta_3 \text{Knowing at least 1 authority figure} * \text{Asset Index Quartiles}_{ij} + \beta_4 \text{Other Network}_{ij} + \beta_5 X_{ij} + \beta_6 HH_{ij} + \beta_7 \text{Violence since child was 6 years old}_{ij} + \eta + u_{ij}$

**Figure 4.4 Regression results of knowing an authority figure on enrolment**



Membership of village groups, in particular a savings group is equally important for a child from an economically marginalised background to enrol in school (see Figure 4.5). The proportion of children currently enrolled in school is higher at each quartile of asset index for those household who are part of a savings group. In fact, for the poorest households (1st quartile) 100 per cent of the children from households with savings group membership are enrolled in school (for precise numbers in each category see Annexe 4 Table A4.6). While Figure 4.5 suggests that a higher proportion of children in the 2nd and 4th quartile of asset index work if the household is part of a savings group, this result is not significant (refer to Annexe 4 Fig A4.1). Hence, we focus on the role of membership in savings groups on child's enrolment status, given the economic background.

## Figure 4.5 Assets, Savings group and outcomes of interest

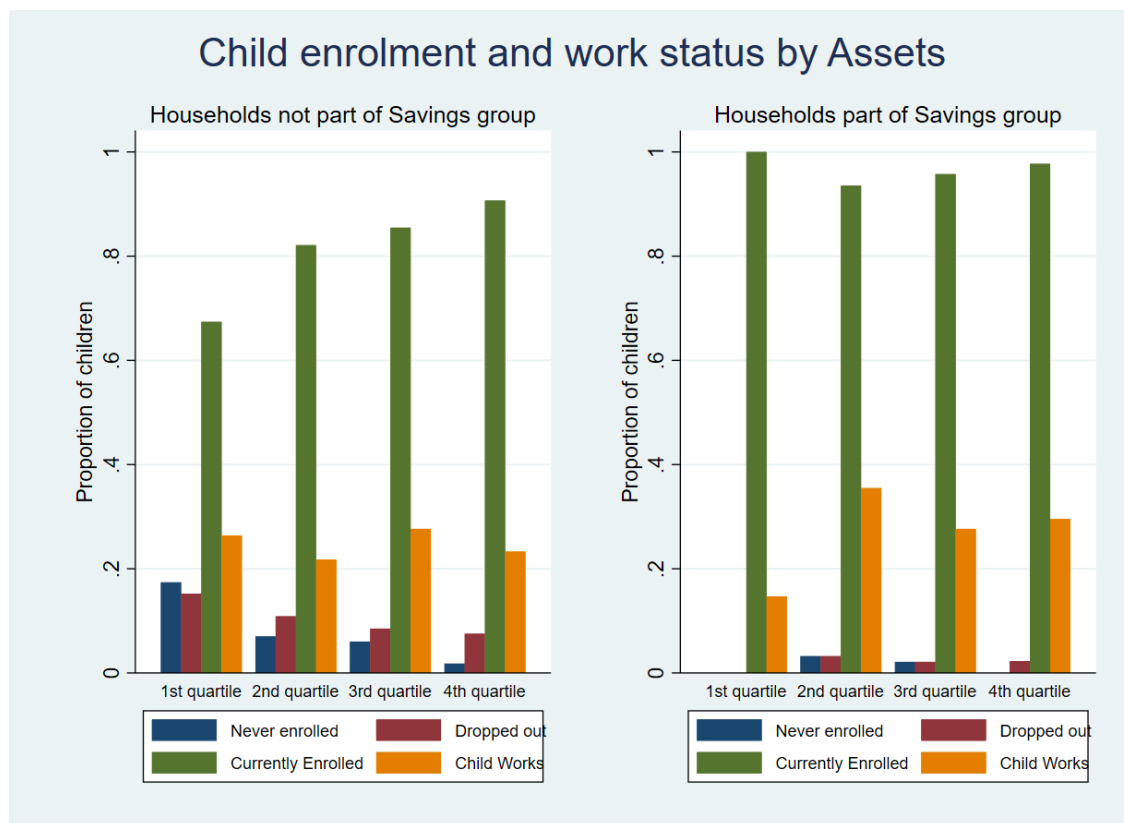


Figure 4.6 below reports the results of the regression graphically,<sup>12</sup> illustrating that membership in a savings group is most beneficial for a poor household. It increases the likelihood that a child will enrol in school by almost 10 percentage points for the poorest (1st quartile) households. This result is statistically significant.

<sup>12</sup> Figure 4.6 reports the average marginal effects ( $\beta_3 + \beta_1$ ) of the OLS regression -  $Y_{ij} = \beta_0 + \beta_1 \text{Membership of savings group}_{ij} + \beta_2 \text{Asset Index Quartiles}_{ij} + \beta_3 \text{Membership of savings group} * \text{Asset Index Quartiles}_{ij} + \beta_4 \text{Other Network}_{ij} + \beta_5 X_{ij} + \beta_6 HH_{ij} + \beta_7 \text{Violence since child was 6 years old}_{ij} + \eta + u_{ij}$

**Figure 4.6 Regression results of participation in savings group on enrolment**



### 4.3 Implications: Emphasising the social dimension of projects

These results provide evidence that social networks and social relationships play a role in access to education. As we have seen, if a child's family knows a religious or state authority, she/he is more likely to be enrolled in school, controlling for other factors that might influence enrolment – and the effect is particularly strong for poorer households within the sample. This result is of important, as it adds a layer to the understanding of marginalisation from education. As we have seen in the previous section, children of poorer households, and households affected by the negative income shocks that are common in violent conflict are at risk of dropping out of school. The results in this section, however, show that social networks and relationships can act as a buffer – or shock absorber, and partially counter the negative effect of economic marginalisation. In a sense, this is not surprising, and it confirms a well-known result from the literature on social safety nets. This is even less surprising in societies where economic activities are still largely embedded within social

networks, and where lineage groups continue to wield political and economic power. Nevertheless, it allows us to draw two key conclusions:

First, that among the most economically marginalised, those most marginalised are those that lack social networks and relationships (either with authorities, or with peers, through savings groups). Given that violent conflict can erode and alter social networks – from families, to peer groups, to communities – through a range of processes (from displacement to social polarisation), particular emphasis must be put in identifying the most socially marginalised individuals. Second, it provides a basis for approaches that embed social protection within interventions, and those that seek to bolster social connectivity of households. This is the case of the savings and loans group, which is designed to increase household's access to finance in order to cover school related costs, and relies on pre-existing peer or communal networks, but can also act as a way for households to develop new social networks. Evidence from the qualitative interviews suggests that interventions that help develop networks are appreciated (Int. 20, 27).

## 5. Cultural and political marginalisation and armed conflict

### 5.1 Rationale

In the previous sections, we have looked at economic and social marginalisation, which are closely inter-related. We now turn to cultural and political marginalisation, which we consider as being central in marginalisation from education, especially during protracted violent conflicts, for three main reasons:

First, because the cultural and political dimension is key in understanding which groups have access to resources – which include economic resources, but also resources and services devolved by the state – in particular, education. The Democratic Republic of the Congo is marked by the unequal territorial penetration of the Congolese state (Brandt and De Herdt forthcoming), and its ethno-territorial character (Hoffmann 2019), a legacy of the colonial state that has persevered in the post-colonial era. Historically, particular groups have enjoyed privileged access to the state administration and the economic and political resources devolved by the state, while others have been structurally marginalised from these. The education sector in the DRC has followed a similar historical pattern: it spread unequally across the Congolese territory, and ethno-territorial groups have had very unequal access to it. Thus, understanding marginalisation from education requires understanding which ethnic, cultural or identity groups suffer from systematic marginalisation from the state and the education sector.

Second, because violent conflicts are inherently political, the analysis will help us to unpack the underlying structural reasons for armed conflict in the DRC. Indeed, the structural marginalisation of particular ethno-territorial groups is one of the drivers of the numerous violent conflicts that have shaken the country since the 1990s, which have often taken ethno-territorial cleavage lines (Kisangani 2012; Stearns 2011; Jackson 2006). Understanding the marginalisation of particular ethnic groups from education allows us to understand some of the drivers of violent conflict. Thus, we broaden the analysis from a focus on the impact of conflict on education towards an understanding of how education systems are embedded in broader economic, political and cultural projects (Robertson and Dale 2015) and can act as a driver of conflict themselves (Bush and Saltarelli 2000). Education systems can reproduce of various forms of cultural, political and economic injustice (Novelli, Lopes Cardozo, and Smith 2017). Not addressing these drivers while fostering access to education might potentially fuel the underlying drivers of conflict. As we do not want to overstate the role of marginalisation from education as a driver of

conflict, the education system should eventually be considered as one among various sub-systems from which certain ethnic groups are excluded.

Third, violent conflict often significantly alters and redefines the political configuration of particular areas, and the access of particular groups to education. This has significant policy and programmatic implications. Indeed, a group which might have had access to education at a period in time might be entirely excluded from it following the political and spatial reconfiguration induced by conflict; similarly, a formerly excluded group might gain more access to education due to the same reconfiguration.

## 5.2 Analysis

### 5.2.1 Education as a consequence and driver of structural marginalisation: The case of the Twa

The size and history of the DRC entails significant spatial and social variation in the ethno-territorial organisation of the state, and which groups are structurally excluded from the political power, economic activity, and education. In this study, we put significant emphasis on a particular group, the Twa, who are part of the larger population group known as the 'Pygmies'. We do so for three reasons: first, because of their longstanding marginalisation from education; second, due to the fact that their marginalisation was a key driver of armed conflict in Tanganyika; third, because the violent conflict in Tanganyika has had transformative effects on their social and political situation, including access to education. Although we centrally focus on the Twa of Tanganyika, we draw comparisons with the situation in Ituri.

As detailed in the background section (see Annexe 1), the pygmy populations of the DRC have been among the most marginalised ethno-territorial groups in the history of the DRC, including from education. A World Bank report states that 'Pygmy illiteracy rates are often over 80 per cent and close to 100 per cent for women.' (World Bank 2009, 29).

The relationship between socio-political marginalisation and educational marginalisation is recursive: the Twa's wider marginalisation from politics and society can explain their historical marginalisation from education and their educational marginalisation acts in turn as a driver of their social and political marginalisation. Indeed, given that access to education conditions access to administrative positions and state resources in DRC, this unequal access to education tends to reinforce other inequalities. The qualitative study points to this factor.

In several interviews we found, first, that access to education is a means of distinction between Bantu and Twa: Asked why Twa do not possess land, one respondent answered that “It is because the Bantu are superior to the Twa. Bantu have been to school, Twa haven’t been to school.” (Int. 51); He added: The Twa is a human being with their own inferior culture. We have evolved (*évolué*) thanks to education. Twa are inferior because they haven’t gone to school.” (Int. 51) Here, education sits alongside wider prejudices and means of marginalisation (see Annexe 1 and section below on ‘Understanding the causes of ethno-cultural marginalisation’). Second, respondents explained that Twa have always been excluded from education, as reported by a Twa leader: “The Twa were afraid of the Whites ... Due to the fear, we hid in the forest for a very long time. ... Then the Bantu went to school... And it is because they study that the Bantu disdain us.” (Int. 5). This perception is underlined by the interview with a Catholic administrator who explains how the unequal reach of the Congolese state/faith-based organisations in terms of school facilities disfavoured Twa and others: “The Twa, Holoholo and Bakalanga were unable to study because they didn’t have the means and they didn’t have families in those areas [where schools existed]” (Int. 4). A lack of education is one reason for low representation of certain groups in educational, administrative and political leadership positions (Int. 4). For example, there are maybe a handful of Twa teachers – although most respondents said there are none (Int. 1, 5, 6, 20) – as Twa who finished secondary school are already very rare.

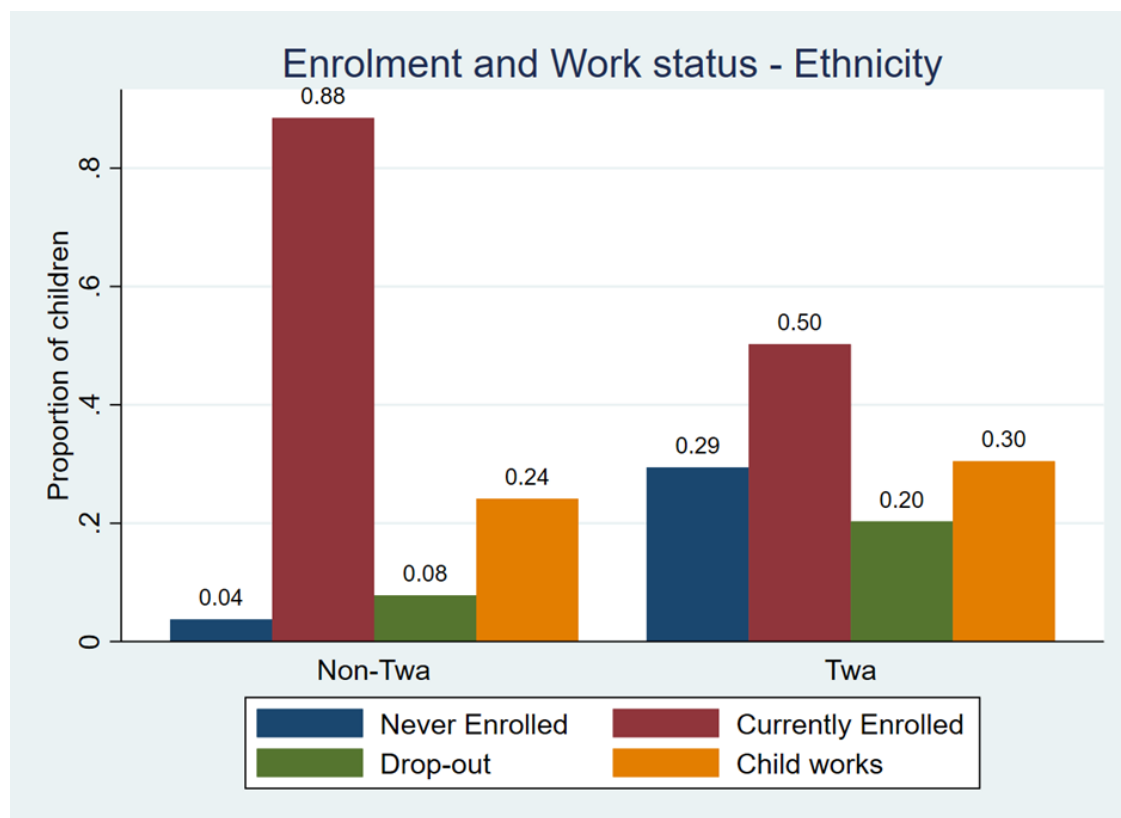
However, the Twa are not the only ethno-territorial group that has been historically marginalised from education, or are marginalised as a result from violent conflict. Given that, across DRC, customary power still has large authority over land rights (Mpoyi 2013), groups that are considered as ‘strangers’, or ‘allochtones’ to particular areas have suffered longstanding marginalisation (Jackson 2006). In the Eastern conflict-affected provinces of the DRC, this has been the case in particular of pastoralist groups, such as the Banyamulenge of South Kivu, or the Hema of Ituri. Violent conflicts pitted along these lines have generated significant political and spatial reorganisation, often increasing the marginalisation of these groups from the education system.

### **5.2.2 The marginalisation of Twa populations: Evidence from the quantitative study**

The marginalisation of the Twa from education is one of the strongest and most consistent results of our study. In our sample, we find a significant gap in enrolment between the Twa and non-Twa households (see Figure 5.1). While 88 per cent of the Non-Twa children are currently enrolled in school, the corresponding figure for Twa is just 50 per cent. 29 per cent of the Twa children have never been enrolled in school and 20 per cent have dropped out. The proportion of children who work is 6 percentage point higher among the Twa

than the Non-Twa. These differences are statistically significant (See Annexe 4 Table A4.7).<sup>13</sup>

**Figure 5.1 Average of enrolment and work status by ethnicity**



Furthermore, having discussed the importance of social networks in the previous section, we also find significant social marginalisation of the Twa, both in the size of their social networks, and their connections to authorities. Table 5.1 compares the averages of these social network dimensions between the Non-Twa and Twa households. Twa households have smaller network of relatives. Only 16 per cent of the Twa households know an authority figure as compared to 27 per cent of non-Twa households. Twa households are part of fewer village groups. On average, 2.5% of Twa households are members of savings groups, while the corresponding figure is 13% for Non-Twa households. As discussed in the previous section, isolation from village networks (and in particular savings groups) and networks of state and religious authority is associated with further marginalisation from education.

<sup>13</sup> Annexe 4 Table A4.7 reports the t-test of difference in enrolment and work status between non-Twa and Twa children.

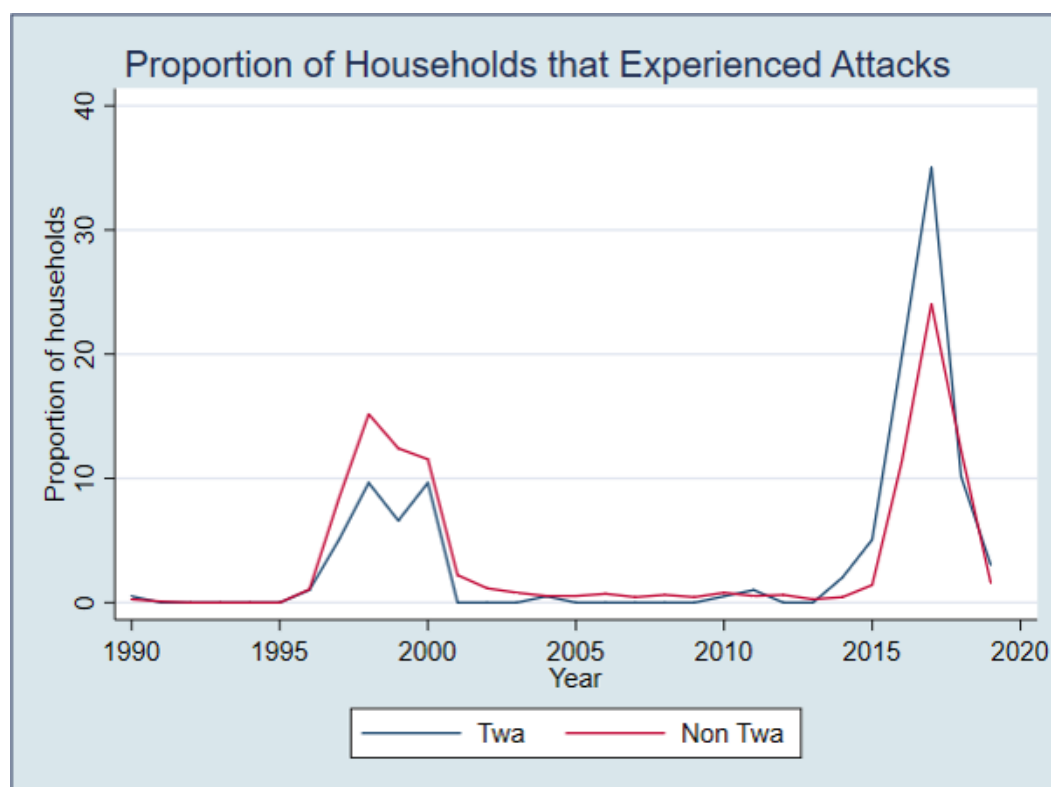
**Table 5.1 Average of network variables by ethnicity**

Variable	(1) Non Twa Mean	(2) Twa Mean	(3) t-test (1)-(2)
Number of non co-resident relatives	5.013	4.259	0.754**
Number of household members	7.886	6.680	1.206***
Proportion of households knowing at least 1 authority figure	0.267	0.162	0.105***
Number of groups in the village the household is member of	1.240	1.046	0.195***
Proportion of households participating in savings groups	0.134	0.025	0.109***
<b>N</b>	<b>1,127</b>	<b>197</b>	

Note: The value displayed for t-tests are the differences in the means across the groups. \*\*\*, \*\*, and \* indicate significance at the 1, 5, and 10 per cent critical level.

Another significant dimension of cultural and political marginalisation relates to exposure to violence, as Twa populations have been significantly more exposed to violence than non-Twa populations during the Twa – Bantu conflict, which affected the territory of Kalemie, where the survey was carried out (along with Kongolo) in 2016-2017. Figure 5.2 shows the distribution of households which have experienced an attack since 1990 by Twa and Non-Twa status.

**Figure 5.2 Distribution of violence from 1990 to 2019 by ethnicity of households**



Finally, a result of our analysis is that the effects of violent conflict on education are worse for Twa populations than for non-Twa populations. While exposure to violence is negatively associated with educational enrolment (as illustrated in Section 2.), Twa are more negatively affected by violence than non-Twa in terms of educational outcomes. Figure 5.3 reports the predicted probability of enrolling in school conditional on being exposed to violence (See Annexe 4 Table A4.8).<sup>14</sup> When exposed to violence since 1990, children from Twa households are 21 percentage points less likely to enrol in school as compared to Non-Twa households. When exposed to violence since the child was born, children from Twa households are 22 percentage points less likely to enrol in as compared to Non-Twa households. Finally, when exposed to more recent violence since the

<sup>14</sup> Figure 5.3 is based on the 3 regressions reported in Annexe 4 Table A4.8 –

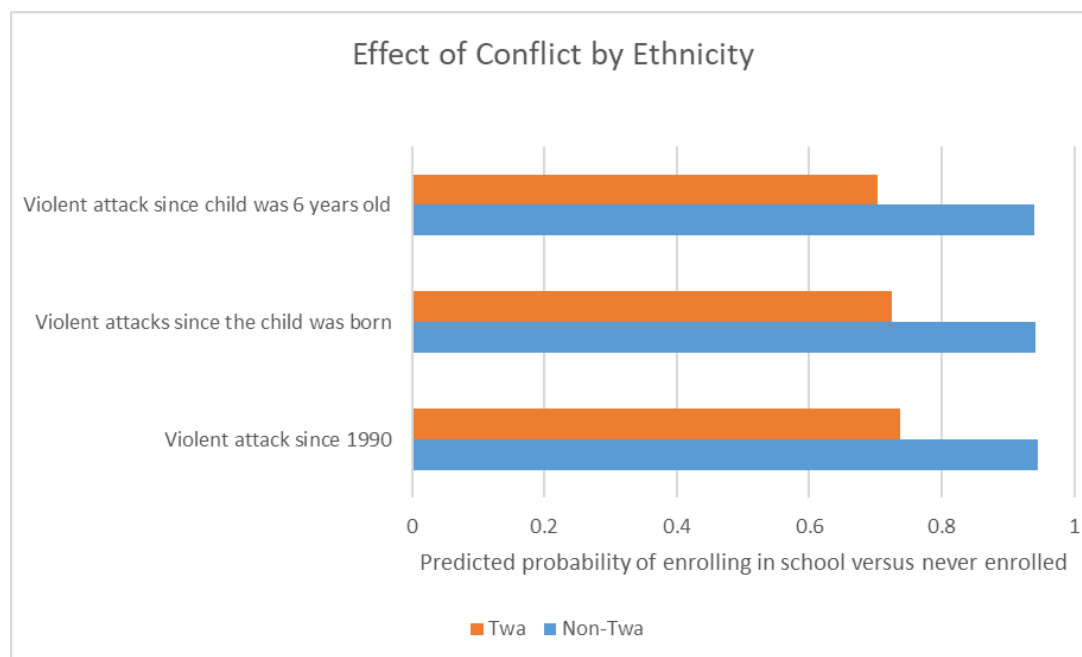
$$Y_{ij} = \beta_0 + \beta_1 \text{Violent attack since 1990}_{ij} + \beta_2 \text{Twa}_{ij} + \beta_3 \text{Twa} * \text{Violent attack since 1990}_{ij} + \beta_4 X_{ij} + \beta_5 HH_{ij} + \eta + u_{ij}$$

$$Y_{ij} = \beta_0 + \beta_1 \text{Violent attack since child was born}_{ij} + \beta_2 \text{Twa}_{ij} + \beta_3 \text{Twa} * \text{Violent attack since child was born}_{ij} + \beta_4 X_{ij} + \beta_5 HH_{ij} + \eta + u_{ij}$$

$$Y_{ij} = \beta_0 + \beta_1 \text{Violent attack since child was 6 years old}_{ij} + \beta_2 \text{Twa}_{ij} + \beta_3 \text{Twa} * \text{Violent attack since child was 6 years old}_{ij} + \beta_4 X_{ij} + \beta_5 HH_{ij} + \eta + u_{ij}$$

child was 6 years of age, children from Twa households are 24 percentage points less likely to go to school as compared to non-Twa households.

**Figure 5.3 Regression results of the differential impact of conflict by ethnicity on enrolment**



### 5.2.3 Understanding the causes of ethno-cultural marginalisation

To summarise the results, we found significant evidence that the Twa are marginalised from education, that they were more exposed to violence during the Twa-Bantu conflict, and that the effect of violent conflict on education is more acute for Twa populations than for non-Twa populations. In this section, we explore the qualitative interviews to identify the factors that are presented to explain these results. We focus mainly on the Twa populations of Tanganyika, but also incorporate insights from the interviews carried out in Ituri. Ituri also has one of the largest populations of Twa in the DRC – referred to as ‘Mbuti’ in the province. It has also been affected by a longstanding conflict between two ethno-territorial groups, the Hema and the Lendu, which has often turned violent. We analyse the articulation between political marginalisation of ethno-territorial groups and economic and social marginalisation. We group the reasons emerging in the interviews in the following way: (1) Way of life; (2) Economic marginalisation; (3) Lack of valuation of education; (4) Discrimination; (5) Spatial segregation.

*Incompatible ways of life?*

First, many respondents claimed that the way of life of certain groups simply does not allow them to access school and finish an entire school year. This particularly concerns non-sedentary lifestyles associated to hunter-gathers in the case of the Twa of Tanganyika – particularly those dwelling in the forest – and pastoralist lifestyles in the case of the Hema of Ituri (e.g. Int. 13; 20; 74). While some quotes associate the forest and Twa's lifestyle as generically incompatible with education, others point to a more nuanced relationship between the obligations of the hunter gatherer lifestyles and education, pointing out that the incompatibility is seasonal (Int. 1, 51). Forest-related activities reportedly intensify in April and there is a reported lack of schools in the remote regions where the Twa are living (Int. 51). Hence, Twa children are likely to miss exam periods and thus become unable to progress in schools (Int. 1).

Then again, one Twa leader stated “It's a thing of the past that our boys accompanied us on a hunt and the girls accompanied their mothers to gather roots and faire la cueillette.” (Int. 5), implying that the ‘way of life’ argument might in fact be more of a stereotype than an accurate description of their lifestyle. Indeed, our analysis of narratives about Twa's (lack of) perceived value of education might suggest that the ‘way of life’ argument needs to be situated within much wider negative stereotypes about the Twa (see also Annexe 1 and 3).

*Economic marginalisation*

Second, economic marginalisation is a key reason why few Twa children are enrolled in schools, although the evidence is somewhat inconclusive and contradictory. We addressed this issue in Section 3 and now provide a more thorough analysis. Twa populations have traditionally relied on forest products for their livelihoods (see Annexe 1). Due to slash-and-burn agriculture and other factors, however, access to these products has degraded: “we don't go to school because Bantu chiefs took the possibility of hunting away from us, which is our income source.” (Int. 5). Additionally, the Twa are largely excluded from access to land, trade and other activities, as a result of their political marginalisation from state institutions and Bantu customary authority. As a result, the Twa are significantly poorer than non-Twa (see Table 5.2). The Twa own fewer assets, earn less than a fourth of Non-Twa monthly income, and own fewer land plots.

**Table 5.2 Average of economic status by ethnicity**

	(1) Non-Twa		(2) Twa		(3) Difference
	N	Mean	N	Mean	(1)-(2)
Asset index	1,127	0.213	197	-1.218	1.431***
Household monthly mean income in last 12 months (1000s of CDF)	1,127	69.16	197	16.83	52.33***
Number of land-plots owned	1,127	1.99	197	1.14	0.85***
Proportion of household who privately own land	918	0.10	130	0.04	0.06**

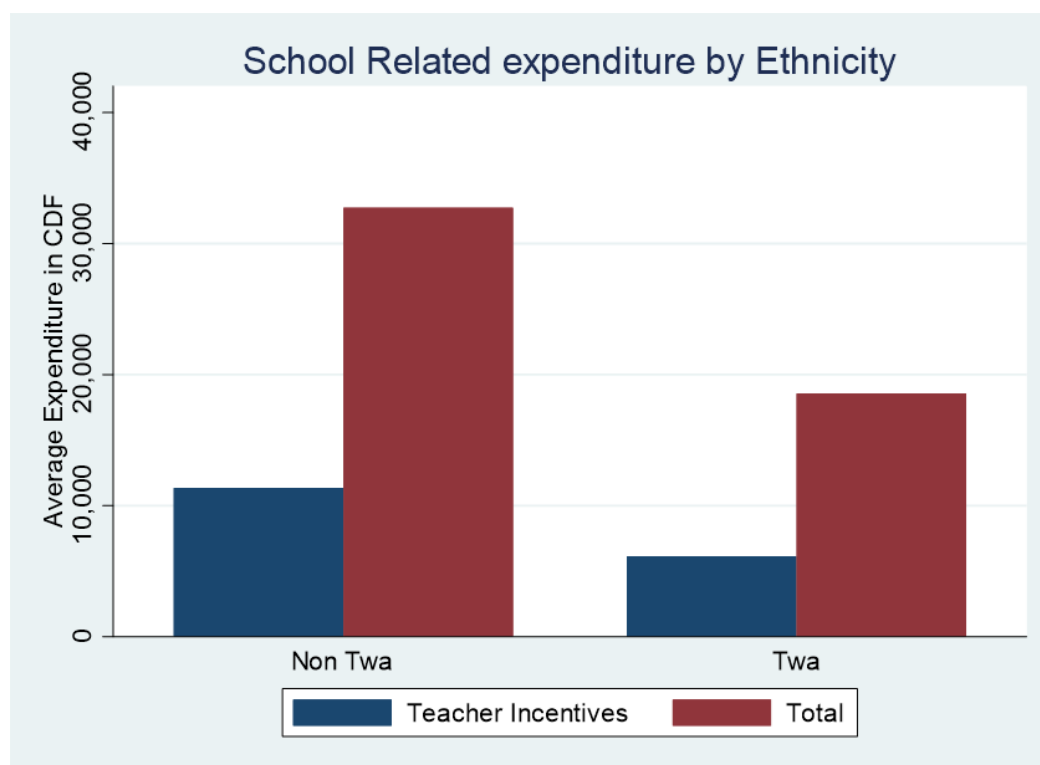
Note: The value displayed for t-tests are the differences in the means across the groups. \*\*\*, \*\*, and \* indicate significance at the 1, 5, and 10 per cent critical level.

Twa and Bantu respondents alike mentioned that the lack of income is a major reason for low enrolment levels (Int. 5, 13, 41): “We are afraid of school fees. We don’t have the means to cover the costs of education.” (Int. 49) Moreover, there is a relationship between their lifestyle and economic marginalisation: one of the reasons why the Twa might leave schools to work in the forests at certain periods is precisely because they need income to pay for their children’s school fees. In sum, the financial constraints in the education sector that operate across all of the DRC, as we showed in Section 3, can be particularly acute for specific ethno-territorial groups.

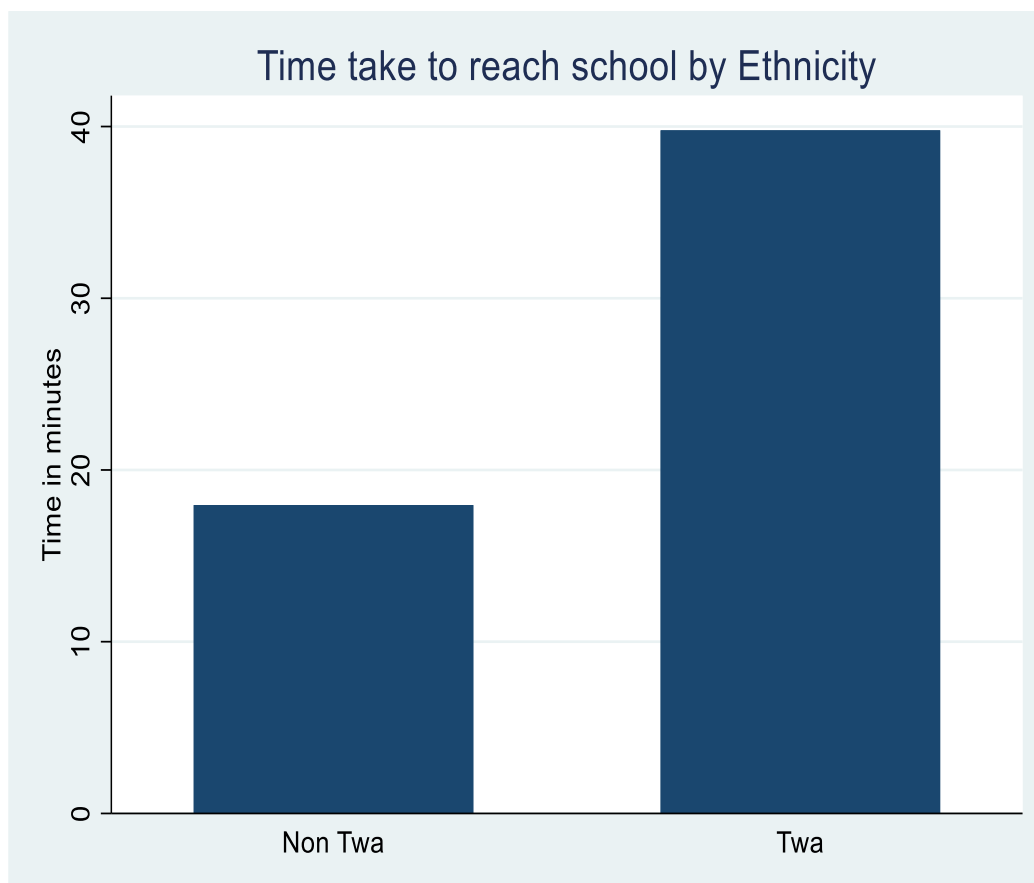
At the same time, our qualitative data suggest that initiatives had been taken throughout the province of Tanganyika to reduce school costs for Twa children, particularly by capping or completely removing school fees for Twa students: “We let them come for free, when we ask the motivation fee, their number decreases.” (Int. 43; see also Int. 20, 47) While some Twa resist the statement that Twa are exonerated from school fees (Int. 8), our quantitative data confirm this general trend. Figure 5.4 demonstrates that Twa children who are enrolled in school pay significantly less school fees, sometimes assisted by NGOs (Int. 9, 13, 17). Figure 5.4 reports the total school related expenditures as measured in the survey and one of the main items in the expenditure, teacher incentive payments (for a full breakdown of school related expenditure, see Annexe 4 Table A4.9). Altogether, our data is inconclusive as to which fees Twa students are paying. For example, they reportedly have to pay significant fees for the ENAFEP end-of-primary school exams (Int. 20, 47), most of which does not go to the school but to various other stakeholders. Another interesting point is that one respondent even considered the Twa “privileged” (Int. 40) due to this fee-free practice. This could suggest that some non-Twa parents are jealous of them. Indeed, a Twa father confirms that his children are never expelled while

Bantu children who do not pay the fees are expelled at the end of each month. There are thus similar grievances as could be observed elsewhere when, for example, NGO projects favoured girls over boys.

**Figure 5.4 Average of school related expenditure by ethnicity**



However, we can see in Figure 5.5 below that Twa students spend more time reaching school, potentially as a result of spatial segregation (see part 5), which might offset the reduction of schooling costs, and, combined with the opportunity cost mechanism, continue to act as a financial constraint on schooling.

**Figure 5.5 Average of travel time by ethnicity**

What is striking is that some respondents insist that the Twa do not even come to school when it is free of cost (Int. 15, 13, 74). This suggests that, although important, the economic dimension is not sufficient to explain the low levels of enrolment of Twa populations. The results of the statistical analysis presented at the beginning of this section confirm this, as the ‘Twa effect’ remains significant, even when controlling for income and assets.

#### *Norms and the perceived value of education*

Many non-Twa explain low levels of Twa enrolment through the Twa’s norms and perceptions of the value of education: “Few [Twa] understood the importance of education ... the Twa do not want to study.” (Int. 17; see also Int. 8, 17, 20, 29, 40). According to these very common narratives, there are three factors that mitigate this phenomenon, and these factors are broadly related to social networks: First, it is possible that Twa parents who have been to school are more likely to also support their children in going to school (Int. 49). Second, the increasing proximity to Bantu villages might be an explanation: “As we are living among other people, we are beginning to send our children to school.” (Int. 22) Third, the Twa who practice an institutionalised religion are more likely to appreciate education: “Those Twa who go to church ... send their children to

school.” (Int. 30; see also Int. 41, 43). However, we also gathered a few contradictory statements, saying that there is “no difference between religious and non-religious Twa.” (Int. 17, see also Int. 9), in the sense that none of them go to school. Overall, the link between religious practice and enrolment might be explained by the fact that most schools in the DRC are run by faith-based organisations. Priests and fellow believers might have a positive impact on Twa through what is commonly seen as ‘sensitisation’.<sup>15</sup>

Indeed, for many respondents ‘sensitisation’ (from French: Sensibilisation) is considered a major solution for convincing Twa of the value of education: “99 per cent of Twa don’t go to school, but this changes a bit thanks to NGOs’ sensitisation.” (Int. 30, civil society, 23.04.19; see also Int. 20, 29, 40, 43). Meanwhile, not all non-Twa respondents consider sensitisation as a panacea (Int. 1). To be clear, there have been Twa children in school, and the prejudices reveal at least as much about those who carry them than about those against whom they are directed.

### *Discrimination against Twa and resulting shame*

There is yet another dimension of marginalisation against the Twa: striking prejudices and discrimination (see Annexe 1 and 3). When talking to non-Twa people about the Twa, there seems to be a thin line between accurate descriptions of the Twa lifestyle and prejudices, biases and discrimination. When it comes to hygienic standards and clothing, non-Twa respondents have a very similar perception, in fact underlined by Twa respondents. Let us consider the following emblematic quote:

They are complicated, tormented, some are intelligent, others aren’t, they lack resources, they are dirty, they came to school barefoot, torn clothes, holes, dirty. If you talk about cleanliness, they do not show up, they think are being discriminated against. In the village there are wells ... but they do not want to take a bath, young students are very dirty. It’s the parents who neglect, it’s their habits, the parents come to meetings but there is no change, while on the contrary the Bantu are clean.

(Int. 17; see also e.g. Int. 44, 49, 51)

The last bit of this paragraph is most relevant: while the overall perception of Twa appearance might be correct, it is not only a description but a way of differentiating them from the Bantu, of creating a group of others. From here, there is a thin line to deprecatorily viewing their overall lifestyle. More importantly, the Twa are not only being discriminated against verbally but very much

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<sup>15</sup> It seems worth investigating more closely if the existence of Twa teachers motivates Twa households to invest in education. Some sources report one Twa teacher, contradicting most sources that claim that there are no Twa teachers at all (Int. 29).

culturally and in everyday practices: For example, the Twa are not allowed to use the same water source as Bantu; Twa men cannot marry Bantu women although the other way around is acceptable; Twa children must not approach Bantu children, only the other way around, etc. (see Annexe 1). Furthermore, Twa children are seen in similar ways in school, which can be accounted as a reason for low enrolment. While most Bantu respondents claim that Twa *students* are not being discriminated against and that they are intelligent (Int. 43; see also e.g. Int. 9, 20, 40, 41, 44), it seems unlikely that an entire society discriminates against the Twa but has completely positive views about Twa students. For example, a Twa states that “We live in the same village but our [Twa] children study far from here, as they are discriminated against by teachers as if they were the only who acted stupidly.” (Int. 22). Our interpretation is sustained by Irengue and Mulinganya (2016, 6) who report that the Twa in their focus groups stated that the Bantu do not want them to evolve; for example, one Twa child was prevented from enrolling in school in a particular area.

In sum, verbal discrimination, restrictive cultural norms, prejudices and negative judgments are likely reasons for low Twa levels of enrolment and low levels of well-being inside of schools.<sup>16</sup> Considering Twa students as equally intelligent might either be a sign of goodwill, of social desirability or of discourses about non-discriminatory behaviour (as present in many peace education lessons), but it surely does not mean that Bantu teachers and parents are not deprecatorily viewing Twa students. It is unlikely that ingrained negative stereotypes suddenly vanish when children are concerned.

### *Conflict, spatial marginalisation and political reconfiguration*

A key dimension of marginalisation from education of specific ethno-territorial groups is spatial marginalisation and segregation, beyond the issue of distance from schools and related opportunity costs. Understanding the ethnic and cultural component of spatial marginalisation is key in understanding which specific groups have a spatial and geographical advantage with regards to schooling, particularly in countries with uneven spatial distribution of schools such as the DRC.

Historically, Twa populations with nomadic, semi-sedentary and sedentary lifestyles have been more distant from urban centres, where schools are concentrated. Twa sedentary settlements are typically found at the outskirts of Bantu villages, which entails a higher distance from schools that are concentrated (although not exclusively) in the centres. As previously mentioned, our data provide clear evidence that Twa populations have higher transport costs for schooling, a sign of their spatial marginalisation from schooling infrastructure.

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<sup>16</sup> See Working Paper 2 of this research, where we focus more in within-school dynamics and student well-being.

However, of particular importance to our study is understanding the ways in which violent conflict can reconfigure these dynamics of spatial segregation and marginalisation. Qualitative interviews suggest different configurations.

### *Increased spatial segregation*

A first category is increased spatial segregation resulting from violent conflict. A case in point is the area surrounding the town of Tabacongo in the territory of Kalemie, Tanganyika. Before the propagation of the Twa-Bantu violent conflict to Tabacongo in April 2016, Tabacongo displayed a spatial organisation of Twa populations similar to those that can be found in villages unaffected by the Twa Bantu conflict. Twa populations mainly lived on the outskirts of Tabacongo Centre. Twa students attended one particular primary school at the centre of Tabacongo. When the violent conflict erupted, the majority of the Bantu populations of the area were displaced to Kalemie, where schooling took place, intermittently, in displaced schools. But the Twa populations had different displacement patterns: A proportion went to displacement camps, while others fled into the forests. After the peak in violence, both Bantu and Twa populations returned to the area. However, interviews point to the fact that a significant number of Twa did not return from the forest, suggesting that the conflict had induced a 'de-sedentarisation' of parts of the Twa populations. For those who did return, however, the spatial segregation that existed before the conflict significantly increased: According to interviews, not a single Twa lives in Tabacongo centre. In the mentioned primary school in Tabacongo centre, there is no longer a single Twa student, despite the headteachers efforts to convince them to return (Int. 75). In sum, this example illustrates that pre-existing spatial segregation from education of ethnic groups can be increased by violent conflict. Below we add related findings for the case of Ituri.

### *Increased access to schooling resulting from spatial reconfiguration*

Increased spatial segregation from education of marginalised groups is not the only possible configuration emerging from violent conflict. In the province of Tanganyika, the Twa-Bantu conflict led to the emergence of areas of 'Twa self-government', particularly in the territories of Nyunzu and Manono, or the village of Lukwangulo in Kalemie, with high proportions of Twa populations. Interviews point to the emergence of Twa 'customary leaders', with control over the allocation of land, and new forms of Twa administration and policing. In such contexts, political self-determination can entail an increasingly sedentary lifestyle of Twa populations, as these can access economic activities from which they were previously excluded, in particular agriculture and trade. Although our interviews do not allow us to give a definitive answer to this question, there are signs that this transformative process is giving rise to increasing demands for education provision: "There are also Twa who demand schools. In the Sous-Division of Nyunzu 2 there is a Twa school. We have a Twa teacher with a Muntu head teacher, Bantu also go there." (Int. 29; see also Int. 15). There are

also other Twa-only schools (e.g. in Kalemie) or twa-only classes (e.g. in Moba), but with Bantu teachers (Int. 1). One respondent made a link between a changing mentality regarding education and political representation: 'I think they are beginning to understand [the value of education] as they are increasingly represented in institutions' (Int. 20).

Thus, although we need to remain cautious as this is occurring against the backdrop of very low levels of Twa enrolment, there seems to be change occurring, whereby the increased political autonomy of the Twa resulting from the violent conflict is accompanied by increased demands for 'integration' and 'development', meaning access to land, political leadership, human rights, but also education.

#### **5.2.4 Ethnic conflict in Ituri: similarities and differences regarding education**

As we also conducted research in the province of Ituri, we will now present qualitative data about similarities and differences concerning education, conflict and ethnic groups between Ituri and Tanganyika. Importantly, our empirical evidence from Ituri is thinner than in Tanganyika, which begs caution about the interpretation of the reported results.

##### *Historical trends and patterns*

There are some key similarities between the Twa-Bantu and Lendu-Hema conflict, also regarding education. First, the Hema and Lendu have different economic livelihoods and backgrounds, the Hema being pastoralists who are said to be 'Nilotic' like the Tutsi, and the Lendu being agriculturalists considered as Bantu. Consequently, the Lendu are considered as autochthonous (Int. 19, Ituri). Second, the Hema have been prioritised by the Belgians, have been sent to school (Int. 26, Ituri), have worked in the administration, for example of mining sites (Int. 19, Ituri), whereas the Lendu have been used as daily labourers (Int. 19, Ituri). Hence, the children of Lendu, and other ethnic groups such as the Nyali, tend to become artisanal miners like their parents. "Hema [today] work in the administration and education because they have been to school a lot." (Int. 26, Ituri). The Hema are said to value education more than the Lendu. The Hema were closer to the colonialists which allowed them to send their children to school and receive scholarships (Int. 19, Ituri). As a result, "they have brothers in foreign countries who value education and make scholarships available to their children" (Int. 19, Ituri). In the contemporary era, he adds that "schooling requires means, and those with means are Hema and Alourds." (Int. 19, Ituri). Third, and very much related to their treatment during the colonial area, some among the Hema have reportedly come to consider themselves as a superior race (Monga Ngonga 2003, 181). Prejudice against the Hema is common (Int. 19, Ituri).

We have one contradictory source regarding the question of who prioritises education: Asked about which group sends their children to school, he mentions Lendu, Nandais and Bira. As a reason why Hema do not do so, he says that “Hema in this area [an agglomeration] are villagers. Their children take care of cows... The majority of schools are managed by Lendu.” (Int. 10, Ituri) The different perceptions might be due to the locations where the interviews were carried out: Int. 10 Komanda, Int. 19 Kilo état (both Ituri). Thus, a possible explanation are class differences between a Hema educated elite, which values education, and more rural Hema populations, who are less socialized into the education system. Still others do not see a difference between Hema and Lendu’s access to education: “Everyone who is not Bira sends their children to school.” (Int. 1, Ituri).

Importantly, while the Hema and Lendu conflict has been at the centre of attention, there are various other ethnic groups with varying (perceived) values attached to education: “The Lese are mainly hunters. They do not attach great value to education. When you see them, they are almost like Pygmies.” (Int. 10, Ituri).

### *Ethnically segregated schools*

The material we present in the following section remains exploratory, but nevertheless points to key dynamics. In Ituri there are chieftaincies, village, schools that are exclusive either Lendu or Hema (Int. 19, Ituri). For example, one respondent said: “In 2006, the Hema and Lendu separated. In some villages that used to be inhabited by both groups, they now live in separated areas... [Here] we are only Lendu. A few kilometres from here there are Hema... Relations are not good. Here in Djugu it is difficult to find a village with Hema and Lendu.” (Int. 25, Ituri). Regarding education, this dynamic is underlined by the following respondents:

There is currently a system in Ituri: the Nilotiques tend to desire their own schools. It is not easy for a nilotique child to go to a school that is in a Lendu-village. That’s a stark division. The Lendu do the same thing. I am afraid that soon everything will function according to ethnic lines.  
(Int. 26, Ituri)

After the conflict... there was a tendency in each school, workplace, to be among your people... Lendu and Hema also wanted to work amongst themselves to be safe, to avoid discrimination.  
(Int. 20, Ituri)

Our data thus suggest an ethnic segregation and homogenisation of schools. Similar situations exist in other contexts: In Northern Ireland entire neighbourhoods are inhabited either dominantly by Protestants or Catholics.

The school system mirrors this segregation, with 95 per cent of children going either to a Catholic or Protestant school (Connolly, Kelly, and Smith 2009). In Bosnia, since the early 2000s, schools have been ethnically segregated in the “Two Schools Under One Roof” approach (Tolomelli 2015). And, as we have seen, this is increasingly the case in conflict-affected areas of Tanganyika.

In one particular school in Ituri, all teachers are Bira: “They are in their environment and that’s where the school is. Currently everyone prefers working where they feel safe.” (Int. 1, Ituri). Asked whether there are Hema children in his school, a child answers “no, they are not here” (Int. 4-5, Ituri). Two frequently mentioned schools were EP1 Kilo and EP2 Kilo. The two schools are very close to each other (Int. 22, Ituri). Before the conflict, the two schools were open to all ethnic groups. (Int. 25, Ituri). While we have contradictory evidence as to which school corresponds to which group, Lendu or Hema, all sources unanimously underline the segregation as such (Int. 20, 22, 23, 25, Ituri).

Probably due to prejudice and to their historical marginalisation from education, Lendu staff are seen as less effective and qualified (Int. 22, Ituri). Concomitantly, the separation has one major implication: The majority of people in the administration is reportedly already Hema, “because many of them have been to school.” (Int. 26, Ituri) This most likely also holds true for the educational administration. Students become teachers who become head teachers who become administrators. Ethnically segregated schools with different levels of educational quality might thus reproduce ‘ethnic’ disadvantages at an administrative and policy level.

### **5.2.5 Implications: Addressing ethnic segregation in education**

In this section, we have looked at a dimension of marginalisation from education that has particular significance in the DRC: cultural and political marginalisation of ethno-territorial groups. Because of the ethno-territorial organisation of the Congolese state, particular groups have privileged access to education, while others are structurally marginalised. Violent conflict can significantly alter the spatial and political organisation of particular regions, which can either reinforce – or reduce – the marginalisation of particular ethnic groups.

A straightforward implication of this result is that programmes and projects that seek to tackle marginalisation must first understand how cultural and political marginalisation play out in their areas of implementation, and the spatial and geographic distribution of marginalised populations. Given that conflict can alter or increase spatial marginalisation, a reflection around the location of schools and their catchment areas is necessary. As the example of Tabacoongo illustrates, schools that could have included minority indigenous groups within their catchment area in the pre-conflict era might no longer include them in the post-violence phase. The qualitative interviews reveal further insistence by

respondents on taking into account the context, and not applying a ‘one size fits all’ approach to different areas. For example, one respondent demanded a more context-specific intervention, emphasising rural-urban differences: “Even if they can’t solve all of our problems, the NGOs consider us [rural school] in the same way they consider people in Kalemie... We live a remote area where parents don’t have the same understanding... you have to sensitise them over and over again.” (Int. 20).

Moreover, the social and ethnic segregation that can result from conflict, whereby schools can become mono-ethnic, requires an understanding of the underlying ethnic composition of program schools. If this factor is not taken into account, programmes can inadvertently reinforce the relative marginalisation from education of minority groups, and, by doing so, fuel the underlying dynamics of violent conflict. However, given the highly sensitive nature of issue of ethnicity or other identities, such a reflection requires increased awareness to conflict-sensitivity.

Accessing marginalised populations can require developing non-conventional and ‘adaptive’ modes of schooling that can take into account their lifestyles – as with the case of non-sedentary populations. These exist, particularly in countries with large nomadic and pastoralist groups, but they are not common in DRC, particularly with regards to Twa populations. It might also require using different political and social channels to ‘access’ these populations, as, in polarized contexts such as that of Tanganyika, conventional channels might not reach these populations.

## 6. Gender and marginalisation

### 6.1 Rationale

The literature on gender related marginalisation identifies a range of factors in girls' marginalisation from education, ranging from social norms related to education, to domestic violence, to household distribution of labour (See Annexe 2 for a review of the literature). In this study, we focus on marginalisation in contexts of violent conflict, and seek to understand how different dimensions of marginalisation we have identified interact with gender marginalisation.

### 6.2 Analysis

In our sample, we find evidence of a marginal overall gender gap in terms of educational outcomes. 81 per cent of the girls are currently enrolled as compared to 85 per cent boys, and 9 per cent of girls who have never been enrolled in school as compared to 6 per cent for boys (see Figure 6.1). 29 per cent of the girls work in paid/unpaid activities as compared to 21 per cent boys.<sup>17</sup> While these give us evidence of a gender gap, it is not necessarily as stark as expected, and is stronger with regards to work as compared to educational outcomes.

A closer analysis, however, reveals variations in the gender gap according to ethno-cultural groups, in particular the Twa group that was the object of the previous section. Indeed, while for the overall sample the gender gap is at 5 percentage points, the gender gap among Twa households of the sample is at 15 percentage points for educational outcomes (see Figure 6.2 below), while there is no significant difference by gender in the child's work status among Twa.<sup>18</sup>

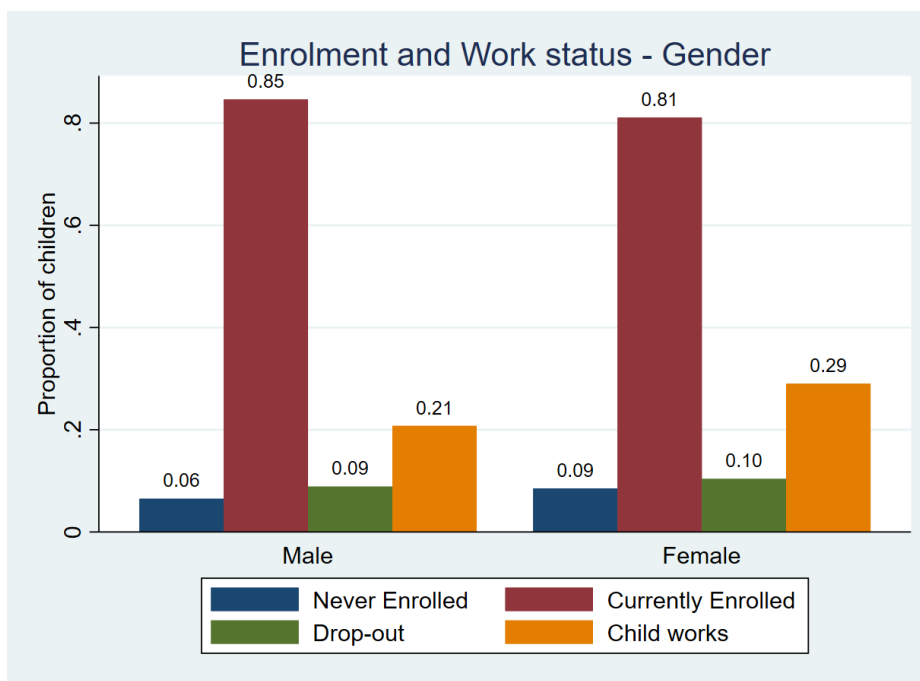
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<sup>17</sup> Annexe 4 Table A4.10 reports the t-test of difference in enrolment and work status by gender. The only outcome variables that are significantly different by gender are being currently enrolled (at 10 per cent) and whether the child works (at 1 per cent).

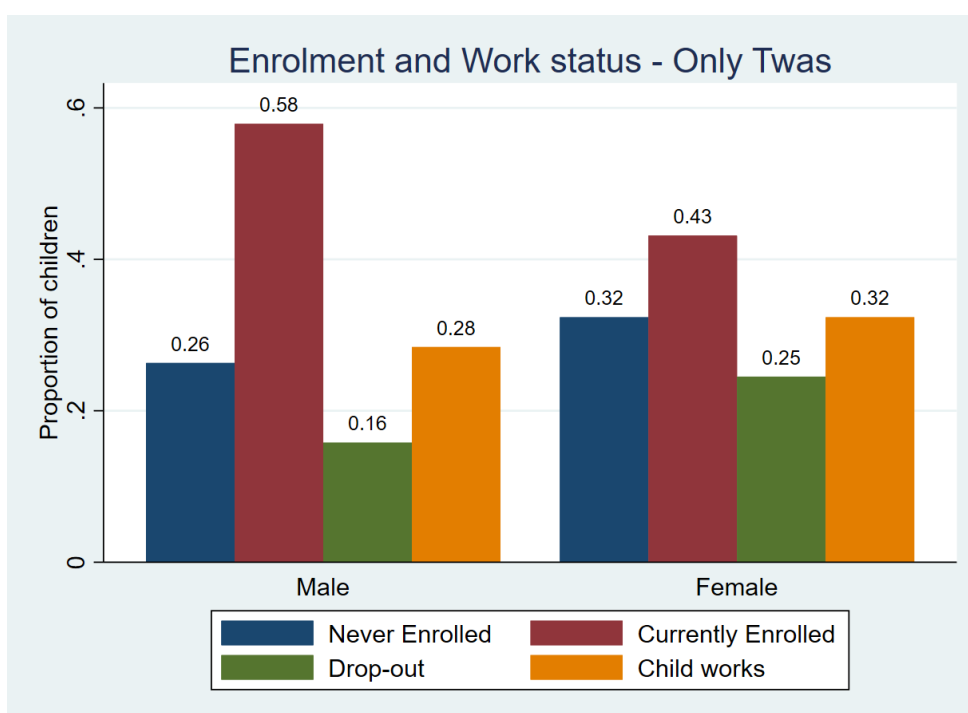
<sup>18</sup> Annexe 4 Table A4.11 reports the t-test of difference in enrolment and work status by gender within Twa households. The only outcome variables that are significantly different by gender are being currently enrolled (at 5 per cent).

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**Figure 6.1 Average of enrolment and work status by gender**



**Figure 6.2 Average of enrolment and work status by gender – Twa subsample**



The gender bias in educational enrolment among the Twa, can in part be explained by gender norms. The quantitative survey administered a module on gender norms consisting of 11 statements – the response to which could be agree, disagree, don't know/unsure. Table 6.1 summarises the percentage of households by ethnicity who agreed to the statements.

33 per cent of Twa households also agree with 'It is acceptable for a girl to get married before she is 18 years old' against 12 per cent of non-Twa households. Women also seem to have lower economic independence in Twa households. 65 per cent of Twa households agree with 'In a home, the wife should help make decisions about spending money' against 81 per cent of non-Twa households. 33 per cent of Twa households agree with 'Only men should work for pay outside of home' against 20 per cent of non-Twa households; and 61 per cent of Twa households agree with 'Both men and women should be able to own land and property' against 78 per cent of non-Twa households.

**Table 6.1 Gender norms by ethnicity**

	% Agree	
	Non Twa	Twa
Only men should work for pay outside of the home	20	33
If the father and mother both work, fathers should share in cooking and cleaning	59	53
It is acceptable for a girl to get married before she is 18 years old	12	33
In a home, the wife should help make decisions about spending money	81	65
Girls should not continue in school if they get married	46	45
Girls and boys should be treated equally in the classrooms by their teacher	86	72
It is acceptable for the woman to disagree with her husband	28	19
There are times when the man needs to beat his wife	39	39
Both men and women should be able to own land and property	78	61
The father should have more say than the mother in making family decisions	75	73
A mother should tolerate violence from the father in order to keep the family together	68	57

Our results show that, while there is an overall gender gap in terms of educational outcomes, the gap is significantly starker for Twa groups. This result shows that there might be significant differences between groups with regards to gender marginalisation, and that programmes could develop tools to take this into account.

## 7. Conclusion

### 7.1 General conclusion

In this Working Paper, we have carried out an empirical analysis of marginalisation from education in contexts of violent conflict, focusing centrally on the province of Tanganyika in the DRC, and, secondarily, on the province of Ituri. Specifically, we have looked at how four key dimensions of marginalisation evolve in contexts of violent conflict: Economic, Social, Cultural and political, and Gender-based marginalisation. The following conclusions can be drawn:

#### 7.1.1 Addressing economic marginalisation in war

Financial constraints are a significant barrier to education in low-income countries, and they are exacerbated in contexts of violent conflict as a result of the negative income shock of conflict on household income. Our study provides further evidence for both phenomena. Our study reveals that, in periods of crisis, teachers and school staff take a range of measures to mitigate the increase in financial constraints to schooling. These include the temporary reduction or cancellation of school fees for all students within a school, or for specific groups of students – in particular IDPs and indigenous groups. Numerous projects, including REALISE, also seek to reduce financial constraints to education, in particular by paying school fees. While the new *Gratuité* policy changes some of these parameters, our research shows that, in contexts where schools are largely financed by household contributions, teachers without a regular government income suffer the most when households are no longer able to pay ‘teacher incentives’ as a result of the negative income shock induced by conflict. As salaries are an important motivation to remain in the teaching profession, it is likely that this drop in teacher income enhances the negative effects of conflict on teachers, further demotivating them and increasing teacher turnover. This turnover can negatively impact interventions in the field of teacher training: When schools are unable to retain trained teachers, investments in their professional development might not be sustainable. Hence, education programmes and policies should remain aware of the indirect effects of their different components on each other: The component aiming to tackle student marginalisation by paying school fees on behalf of girls might, indirectly, weaken another component – teacher professional development.

#### 7.1.2 Social marginalisation and violent conflict

The study partially focuses on the role of social networks and relationships, which condition access to resources and services in societies where economic

activity remains strongly embedded in social networks. In conflict-affected contexts, social networks and relationships also condition exposure to dynamics of violent conflict – from direct violence, to recruitment, to exploitative practices that are common in such contexts. They are therefore key in understanding dynamics of marginalisation from education. Our results demonstrate that household's social ties with authorities has a positive effect on children's education, and the effect is stronger for poorer households. Conversely, social marginalisation can significantly increase educational marginalisation. These results suggest that programmes should bolster their social components, and possibly adopt social protection type approaches.

### 7.1.3 Political marginalisation of identity groups

The study shows that the political marginalisation of ethno-territorial groups is key in understanding marginalisation from education in contexts of protracted conflict. First, because marginalisation from education is both a result, and driver, of the historical marginalisation of ethno-territorial groups. As education conditions access to political and economic resources and positions, the exclusion of particular groups, which can be actively promoted by educational actors, reinforces their political exclusion – in turn reinforcing educational marginalisation. Educational marginalisation can in turn nurture grievances that underpin violent conflicts, which are often pitted along ethnic/identity lines. Not addressing these aspects while fostering the access to education of an overall relatively 'privileged' group might potentially fuel the underlying drivers of conflict.

Second, because some groups might be more severely affected by violent conflict. Our results show that the Twa minority of Tanganyika has not only been more exposed to violence during the Twa-Bantu conflict, but also that exposure to violence has more severe effects on the Twa than other groups, in terms of educational outcomes. We analyse key mechanisms, in particular spatial segregation, and the social segregation of schools along ethnic/identity lines. Thus, the effect of conflict on education varies from group to group, and it is crucial to understand these differences when designing education policies.

Third, violent conflict often significantly alters and redefines the political configuration of particular areas, and the access of particular groups to resources and services such as education. Indeed, a group which might have had access to education at a period in time might be entirely excluded from it following the political and spatial reconfiguration done by conflict; similarly, a formerly excluded group might gain more access to education due to the same reconfigured patterns.

### 7.1.4 Gender and marginalisation

Finally, the study looks at gendered marginalisation from education, and how it interacts with the other dimensions. We find that, while there is an overall gender gap in educational outcomes, the gender gap is significantly starker for particular ethno-territorial groups – in particular the Twa of Tanganyika. This result further reinforces the necessity of situating gender in other types of marginalisation.

## 7.2 Policy recommendations

1. **Monitor how violent conflict alters marginalisation.** Violent conflict can redraw the lines of marginalisation: it can reinforce existing marginalisation, cause the marginalisation of new groups or provide marginalised groups with new opportunities. Being aware of these dynamics is crucial to design projects that are not based on outdated patterns and dynamics.
2. **Include the entire student body.** In a context of very low income and violent conflict, most households have difficulties to pay for boys or girls. Even when a project's focus is on girls, they do not study in a social vacuum. Boys and girls in classes without support feel neglected, build up grievances and might discriminate against students who receive support. Providing some support to other groups can offset these potentially negative effects.
3. **Ensure timely payments.** In a context where children are expelled at the end of the month in case of non-paid fees, timely payment is almost as important as payment *per se*.<sup>19</sup> Mobile banking was used but perceived to be unsuccessful by school communities. A regular monitoring of the adequateness of innovative payment schemes should be carried out, especially in contexts of irregular access to phone infrastructure.
4. **Consider wider links between education and peacebuilding.** When armed conflict is rooted in the marginalisation of certain groups of people, education projects can inadvertently reinforce inequalities of access to education. A careful consideration of the inequalities of access to education of different groups which education programmes might generate or reinforce is therefore necessary.
5. **Reinforce activities that create social relationship, and social protection.** Our report shows that social isolation has detrimental effects on access to education. Projects should reinforce the components of programmes that allow social relationships and networks to develop, such as Village Saving and Loans Groups, or extra-curricular activities, for both students and parents. Social protection approaches can also be embedded within Education policies and programmes.

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<sup>19</sup> While *Gratuité* policy was announced in September 2019, many teachers remain unpaid by the government and the full implementation of *Gratuité* has not, as of the date of this report, been fully achieved.

# Annexe 1

## A1 Contextual background: Conflict, kinship systems and education in Tanganyika

### A1.1 Who are the Twa? Social differentiation and identity in Tanganyika

#### *A1.1.1 The Pygmies and the Twa in the history of Africa*

The Twa or Pygmy populations of the African continent constitute among the most marginalised, and least understood, groups of populations within the continent. Reductionist, essentialist, racially biased and simplistic conceptions of the Pygmy populations have abounded since the times of Ancient Egypt (Newbury review). They have been considered atavistic, refusing to integrate, or backwards. The very name (Ba)Twa – a polysemic signifier – designates a wide range and forms of marginalisation – outsiders, small, inferiors, servants, slaves etc. but the most consistent one is ‘outsiders’ or ‘inferiors’ (Jeffreys 2014: 51). At the same time, Jeffreys (2014: 48) shows that the Twa have been intimately connected, linguistically and socially, to the Luba and other Bantu groups. Ethnographic studies of the Pygmy groups have documented that Pygmy groups have significantly different kinship and lineage structures than majority Bantu ethnic groups, as a result of pre-colonial differences in their social structure (Vansina 1966, 1990; Minority Rights Group 2000; Klieman 2003), as well as their differentiated historical integration into the Congolese ethno-territorial political order.

Historically, the Twa are hunter-gatherers and have been considered the “Children of the Forest” or “Forest People” (Turnbull 1962; Duffy 1985). Various groups have turned forest into “farmland, pasture, commercial plantations, and protected areas for conservation or military exercises” and logging (Minahan, 2002: 1941-1945). Increasingly deprived of their traditional livelihoods, they have moved towards Bantu villages and urban areas where they have no right to land and must become tenant farmers.

There are different estimates of the number of Twa: Minahan (2002, 1941) speaks of approximately 170,000 Pygmies in central Africa. A World Bank report from 2009 includes much higher estimates for the DRC only, from 100-250,000 (by researchers), 450,000 (by Pygmy organisations) and up to 660,000 (by the World Bank). The latter represented 1 per cent of the entire Congolese. According to that report, the Twa lived in nine of the eleven former provinces, in 59 of the 147 territories (World Bank 2009, 6, 12, 20). Interestingly, despite the prevalent image of the Twa, only 30,000-40,000 were believed to be hunter-gatherers (World Bank 2009, 6).

While the Twa are sporadically appreciated for their knowledge of the forest and its products, they suffer from a long-dating multifaceted marginalisation:

Neighbouring people will not eat or drink with them, allow them into their houses, or accept them as marital or sexual partners. They are not allowed to take water from the community wells, and their communities are segregated from others, forcing them to live on the outskirts of population centres, on marginal land unwanted by others. These practices are less rigid in urban areas, but many underlying biases against the Twa remain.

(Monahan 2002: 1942)

Their low number, prevailing stereotypes, dispersed communities and low economic power have reinforced their extreme marginalisation from all political and administrative spaces, including schools. Minahan (2002: 1945) summarised their situation as follows: “the Twa are among the poorest people in the world, without rights or wealth, perhaps the world’s most neglected national group.”

#### *A1.1.2 The Twa of Tanganyika (before recent conflict)*

Northern Katanga has historically been the impoverished part of Katanga, compared with the industrialised Southern mining centres. Correspondingly, a World Bank report from 2010 suggested that Tanganyika was among the provinces that would lose through *decoupage* (World Bank 2010). Furthermore, Tanganyika, as most eastern provinces of the DRC, has been embroiled in repeated rounds of violent conflict since the 1990s (see below: Part A1.2). Today, large areas of the province are characterised by the militarised political economy prevalent throughout eastern DRC, whereby non-state armed factions fight amongst themselves and against the national army for control over key resources – in particular mines, land, and trade. As in most of the DRC, ethnicity is a key aspect of social and political organisation in Tanganyika. The ethno-territorial structure of the Congolese state, whereby different ethnic groups compete for resources devolved by the central state, has generated acute politicisation of ethnicity and social polarisation along ethnic lines, and has often determined the lines of polarisation of the repeated rounds of violent conflict in the province (Hoffmann 2019; Hoffmann *et al.* 2016).

Tanganyika is one of the provinces with the highest number of Twa in the DRC. According to the mentioned World Bank report, almost half of all Twa in the DRC live in Tanganyika (World Bank 2009, 88), where it is again highly concentrated in a few territories (especially Manono, Nyunzu and Kalemie). The Twa in Kongolo seem apart, not least because they speak a different dialects. However, the Twa in Tanganyika are usually neglected from major surveys and are not represented at all in the provincial (let alone national) parliament (Englebert, Calderon, and Jené 2018).

Similar to other Twa, our respondents almost unanimously reported a lifestyle summarised as follows: “The Pygmies love living in the forest” (Int. 1) where men hunt game and women gather food and medical roots and leaves that they also sell to Bantu (Int. 74). The forest is the centre of their traditional livelihoods, their beliefs and rites. Even Twa who mainly live outside of the forest frequently travel to the forest (Int. 13) where they live a nomadic lifestyle due to economic necessities and custom (Int. 9, 74). In popular perception, Twa are unreliable and unsteady, “they disappear suddenly to go hunting and return a few days or months later (Int. 13), especially around April” (Int. 1). Villages are seen as “incompatible with their way of life” (Int. 13). In reality, however, many Twa spend most of their time outside of forests. The forest is no longer only a source of livelihoods but has become a symbol of social differentiation between Twa and Bantu but also forest-Twa and non-forest-Twa. In fact, in several cases we found groups of Twa who live in villages outside of the forest and deprecatorily view other Twa who remain in the forest. Most respondents agreed that Twa living in forests and those living in villages are very different.

Very different. Twa in the forest maintain their habits. They are primitive.  
(Int. 74)

Forest-Twa don't know the law. They are against the order from the state. For them, if he has his arrow, he believes to have all the power.  
(Int. 74)

Despite these often clear-cut explanations, our research suggests several tensions and inconsistencies in narratives about the Twa's lifestyle, livelihoods and marginalisation. First, there is a significant cleavage between images about the Twa and the Twa's actual living conditions: many Twa seem to live in villages outside of the forest, with some journeys to the forest; they are not only hunter-gatherers but have begun working as tenant farmers; there are Twa chiefs. These reconfigured patterns have apparently begun to emerge before the armed conflict and the armed conflict has increased them, as we detail in Part A1.2.

Second, there is an inherent paradox in Bantu's narratives about the Twa: while many state that they would like the Twa to become more like them, they discriminate against them verbally,<sup>20</sup> socially,<sup>21</sup> politically,<sup>22</sup> economically.<sup>23</sup>

<sup>20</sup> Exemplary statements by Bantu about Twa: chip on their shoulder (Int. 74), not trustworthy (Int. 74), not wise, they get angry for nothing (Int. 44), children [while Bantu are adults] (Int. 41), inferior beings (Int. 51), hypocritical (Int. 13), stubborn (Int. 13), we're very different from the Twa. They are not intelligent (Int. 15); They are humans! As I said, humans who need help to live normally like other humans (Int. 31).

<sup>21</sup> Examples: Not drinking from the same source of water; not eating together; a plate from which a Twa has eaten is thrown away; Twa children can't approach Bantu children to play, only the other way around; Twa men can't approach Bantu women, but Bantu men can approach Twa women;

<sup>22</sup> Example: Twa can't become chiefs because they do not know their ancestors.

<sup>23</sup> Examples: Meagre salaries for Twa as day laborers; Twa can't own land.

As one respondent said: “Bantu are unhappy when a Twa is trying to make progress” (Int. 51)

Third, marginalisation is intimately connected to a striking tension with regard to the Twa’s background. On the one hand, most people agree that Twa are autochthonous of Congo, even considered the “first inhabitants” (Int. 15). On the other hand, they are autochthonous to no particular region: “I would like to know if they are the first inhabitants **everywhere?**” (Int. 74) Denying this question implies that it is impossible to say where they were the first inhabitants; then, they become autochthonous to nowhere because they are autochthonous to everywhere.

## **A1.2 The Twa-Bantu conflict**

In 2012–13, the longstanding marginalisation of the Twa escalated into ethnic violence, confronting Twa and Bantu armed groups, causing widespread destruction and displacement. According to an IRC report published in 2017, between July 2016 and March 2017, the conflict resulted in the destruction of over 400 villages, the rape of over 200 women, and the displacement of 557,000 people in the province of Tanganyika (22 per cent of the population in Tanganyika according to the UNCHR) (Groleau 2017). However, academics and journalists paid very little attention to this conflict, and little information is publicly available on one of DR Congo’s ‘forgotten conflicts’. This provides a main motivation for this study. To understand the conflict, we now unpack how long-term structural marginalisation can be transformed into armed conflict and then provide more details on the Twa-Bantu conflict.

### ***A1.2.1 The transformations of structural marginalisation into armed conflict***

Dominant narratives prevalent in the media, reports and interviews attribute the Twa-Bantu violent conflict primarily to its underlying structural causes, namely the longstanding marginalisation of the Twa populations. As we have seen, this marginalisation spans across all sectors of activity – from education, to land ownership, to political representation. While these structural causes undoubtedly play a role in providing a fertile terrain for violent ideologies and mobilisation, they are insufficient to explain why violent conflict between Twa and Bantu populations erupted in Tanganyika and not in other provinces of the DRC, where such marginalisation of Twa populations is equally prevalent, and why it erupted at particular moments.

Key factors in transforming a latent political conflict into a violent conflict have been the successive waves of violence and militarisation that the province of Tanganyika has undergone since the 1990s (as many of the eastern provinces of the DRC), and the changes these have wrought to the political balance in the region. The successful rebellion by Laurent Désiré Kabila in 1996-1997 (First Congo War), initiated and backed by Rwanda and Uganda, and the later conflict

between Kabila and his former allies (Second Congo War, 1998-2003) led to the constitution of numerous paramilitary factions, known as Mai-Mai factions. Similarly, Twa armed groups became involved alongside Mai-Mai and the Congolese military. They served as informants and scouts to larger military factions because of their knowledge of the terrain and their skilled use of bows and arrows. As was the case throughout the eastern Congolese provinces, this created a generation of experienced military leaders, an available stock of weapons, a sense of belonging for masses of unemployed youths and a certain acceptance of violence as a means of solving conflicts. All of these factors existed in Tanganyika and surrounding provinces/former district (South Kivu to the North and Haut-Katanga to the south) well before the Twa-Bantu armed conflict broke out and have facilitated the eruption, intensity and spread of this conflict.

### *A1.2.2 The Twa Bantu-Conflict of the 2010s*

#### **Proximate causes**

The violence that has shaken Tanganyika erupted in 2012-2013 and has several causes. Most sources point to a conflict between Gédéon, the (Bantu) military leader of the Bakata Katanga rebellion of Northern Haut-Katanga and Southern Tanganyika, and Nyumbayisha, one of his former Twa lieutenants. Stories depart as to the origin of the conflict, some mentioning the collaboration of Nyumbayisha and Twa militias with the FARDC in providing information on the Bakata Katanga. This reportedly led to retaliatory attacks by Bakata Katanga against Twa militias and communities in the territory of Manono. Suggesting another related cause. Interviews carried out for this research project point to a prevalent narrative among Twa communities, according to which Gédéon's cannibalistic practices – in particular his wife was accused of eating Pygmy flesh – sparking the outrage of Nyumbayisha. As a result, Nyumbayisha set up his own militia, called PERSI, who entered in violent confrontations against the Bakata Katanga. Such narratives, however, should be taken with critical distance, as they often serve to cover up more prosaic motivations. Either way, around 2012-13 there were experienced military Twa leaders now in opposition to their former Bantu allies.

While these military quarrels seem to have detonated the violence, other factors played a crucial role in its spread. A frequently mentioned reason for the uprising was the refusal of Twa merchants to pay taxes on the sale of caterpillars in markets, and their beating by Bantu as a result, which led to retaliatory attacks by Twa. Symbolic of what was perceived to be an unequal, illegal, and violent regime of oppression against the Twa minority, upheld by the Bantu majority with the support of the Congolese state, these incidents and their aftermath created a template for violent resistance of the Twa against illegal taxes and forced labour.

There is yet another aspect that needs to be mentioned and that reportedly had a catalytic effect on the Twa's willingness to take up arms: the sensitisation of the Twa through human rights groups (Int. 5, 32, 74; see also Irengé and Mulinganya 2016, 5). Respondents claimed that NGOs made false promises in the human rights sensitisation workshops, for example: "I will give you power, you'll be able to marry Bantu women, we'll build schools, and nice houses for you... NGOs who frequently come here are the reason for the conflict in Tanganyika". (Int. 31, civil servant, 23.04.19). This narrative was echoed by many other respondents (Int. 5, 28, 32), who frequently claim that MONUSCO provided assistance to the human rights NGOs (see also Irengé and Kasindi 2017, 10). Again, such a narrative should not be taken at face value, but it can provide pieces of the mosaic of why the Twa suddenly stood up against a historic discrimination.

In sum, the violent conflict is the result of long-term structural marginalisation, experienced military leaders, available weapons, unemployed youths, a certain acceptance of violence as a means of solving conflicts, a discord between Bantu and Twa military leaders, rumours about cannibalism, and two detonating events (caterpillar tax and human rights education), possibly in combination with the strong demographic weight of the Twa in Tanganyika. We now briefly lay out how the conflict spread from its beginning in Manono, Southern Tanganyika, to the rest of the province.

### Spread dynamics

Violence spread throughout Manono territory in 2012-2013. Attacks by militias on both sides sparked the formation of auto-defence forces, who engaged in retaliatory attacks. Progressively, the violence spread to the neighbouring 'territoires' via propaganda, rumours, and the active involvement of military leaders. The violence, however, did not spread to all territories and regions with Twa populations. Probably due to a very low number of Twa and a different language/dialect of Kongolo's Twa, the territory in Kongolo, in particular, was spared from violence. Interviews point to the tight-knit community structures of the Twa populations to explain the rapid spread, in particular the multiple and complex communication systems – based predominantly on envoys (usually young men), sent across large swaths of territory to spread information, but also to the use of mobile phones. Simultaneously, the Twa armed factions – soon evolved into a militia named PERSI – progressed geographically. Interviews points to significant variations in the level of support between and within different Twa entities. Some Twa entities declared full support to the rebellion, and the youth were mobilised through communal resource mobilisation mechanisms to join the militias as soldiers and labour. In certain reported cases, however, the Twa entities refused to join the movement, and did not provide support – in the form of contributions, or labour, to the Twa militias, leading at times to retaliation against reluctant villages by the militias. In most cases, however, the mobilisation

generated divergences and conflicts within the Twa communities. All of this in turn led to the formation of vigilante groups and self-defence militia – called ‘éléments’ – among the majority Bantu populations. This formation was often spontaneous and ad-hoc.

### *A1.2.3 Political Transformations resulting from the Conflict*

A significant consequence of the Twa-Bantu conflict has been a profound change in the political order of particular areas of the province of Tanganyika. As previously discussed, a central tenet of the mobilisation ideology and discourses of the Twa rebellion was the emancipation from Bantu (and particularly Luba) domination, exploitation, and segregation in all spheres of life. According to the interviews, the violent conflict has led to a profound reconfiguration of political, economic and social order in several parts of the province. In several villages, Twa populations have either seized land or obtained it from non-Twa landlords. Other villages have stopped recognising the authority of Bantu customary authorities, and appointed Twa chiefs, who now govern over these entities. Interviews mention separate Twa police systems, and courts, which, although they had existed before, are now ‘openly’ used in a number of Twa entities in Manono, Nyunzu and Kalemie.

## **A1.3 Education and conflict in the DRC**

This section provides insights into the mechanisms that limit or enable the provision of education in conflict-affected provinces of the DRC, beginning with an assessment of primary and secondary education in the country.

### *A1.3.1 Education in the DRC*

Access to primary education in the DRC has accelerated between 2001-2 and 2013-14, a period during which access doubled from 5.47m to 12.6m students, with an annual average growth rate of 7.9 per cent. In 2012, 40 per cent of all children between 6 and 17 years were out-of-school, an improvement over the 25 per cent in 2005 (De Herdt, Marivoet, and Muhigirwa 2015, 21–22). However, there are alarming differences between years of schooling: while 94 per cent of children went to school entered school in 2010, only 67 per cent finished primary school and a mere 19 per cent completed secondary school (estimates by De Herdt, Marivoet, and Muhigirwa 2015, 23). Furthermore, access by no means equals learning. In fact, learning in the Congolese education sector remains a privilege: “in recent research in the southern and eastern provinces of the DRC, an alarming 72 per cent of children in Grades 2 to 4 could not correctly respond to one reading comprehension question on the Early Grade Reading Assessment” (Aber *et al.* 2016, 2).

The major causes for this dire situation are the lack of funding and a poorly functioning administration, both of which can be attributed at least partially to a long history of payroll fraud (Brandt 2019; Gould 1980). A significant share of

public-school teachers is either not registered by the government, or registered but unpaid. This share can be situated at approximately one-third, although recent numbers – especially on unregistered teachers – are unreliable or do not exist. The remaining teachers receive a monthly government salary. This salary has increased since the early 2000s but is still below a promised minimum of USD 205 (for a clerk). Additionally, all kinds of bonuses, allowances and pensions are practically suspended. Due to high number of unpaid teachers, and the insufficient salaries of those who are paid, parents' monthly financial contributions have become institutionalised since 1992, when the government was unable to pay its civil servants. Since then, parents have funded the lion's share of educational expenditures, including a significant share of costs that occur in relation to administrative personnel and offices (Verhaghe 2017). Finally, teacher training is locked in a vicious circle: next to the general lack of funding for continuous teacher training, teachers receive their initial training in the poorly functioning primary and secondary schools. To become a primary school teacher, one only needs a secondary school certificate; hence, poorly trained secondary school teachers teach primary school children who will then proceed to secondary schools with very low levels of learning, later becoming teachers themselves.

Administratively, the Congolese education sector is further characterised by a negotiated system of governance between state actors and FBOs, an increasing importance of international donors especially in agenda-setting processes but less so in the policy-making. Despite a devolution of power towards provinces, the central primary and secondary education Ministry in Kinshasa continues to centralise all major decisions, first and foremost around the authorisation of new schools and administrative offices. Three dynamics must be noted in this regard: First, the education sector expanded massively between 2001 and 2013 through Members of Parliament who acted as brokers between local/provincial and the national level. This expansion did not follow any planning procedures and did not consider teachers' payment status. Second, very few public schools have been authorised to open since 2013 but have nonetheless continued to open and function locally, waiting future formal authorisation. Third, with the appointment of a new Minister of Education in December 2016, a large number of private schools have been authorised to exist, urgently demanding research into the impact thereof. Fourth, the decentralisation – deconcentration – of the Congolese education sector has taken place at an unprecedented pace since 2017, creating new educational divisions and sub-divisions without sufficient funding, thus probably increasing the load that households have to bear.

#### *A1.3.2 Effects of conflict on education in the DRC*

The protracted violent conflict that started more than 20 years ago in the DRC, and continues to this day, has affected the education sector in numerous ways. Conflict-affected areas face similar burdens as other regions in the DRC, such as

chronic underfunding of the education sector (De Herdt and Titeca 2016), prohibitively high school fees (Verhaghe 2017), marginal government investment in infrastructure and pedagogical support, and demand-side factors such as a lack of household income – all of which are exacerbated in conflict-affected provinces. Moreover, violent conflict has a range of ‘direct’ impacts on the education sector: IDPs use schools as shelter, armed groups often use them as bases, which debilitates equipment and infrastructure (GCPEA 2014; UNICEF 2010; Gilchrist, Fellow, and Sheppard 2015; Brandt 2015); Teachers are often directly targeted by violent actors (Brandt 2019a), and internal displacement causes widespread trauma for both students and teachers. Provinces affected by armed conflicts have the highest numbers (*or ratio*) of out-of-school children (DRC 2013), and out-of-school children are particularly vulnerable to recruitment by armed groups (UNICEF 2010).

### *A1.3.3 ‘Education in conflict’ national-level policy*

National level education policy has not paid significant attention to the provision of education in conflict-affected provinces. Before 2010, the government did not have any sectorial strategy for the education sector. Then, the “Stratégie pour le développement du sous-secteur de l’EPSP 2010/11 – 2015/16” (Development Strategy for the sub-sector of EPSP), and the more detailed “Plan Interimaire de l’Education 2012-2014” (PIE; Interim Plan of Education) were adopted and have served as guidelines for government and donor activities. While acknowledging the negative impact of armed conflict on education, the PIE did not particularly include education in emergencies. It did, however, spell out the wish to make ‘peace education’ part of the formal curriculum. In the same period, high-level fora on peace education appeared (DRC/MEPSP; Groupe de travail de l’INEE sur l’éducation et la fragilité; UNICEF; ADEA; USAID 2012). The new sectorial strategy 2016-2025 was strongly shaped by international donors, who pushed for a stronger recognition of education in conflict-affected areas (e.g. pages 135-136 in the version of December 2015). (DRC/MoE 2014). It is interesting to note that the Minimum Standards of the International Network for Education in Emergencies were adapted to North Kivu (SCI, UNICEF, and INEE, n.d.). Finally, one chapter of the national report on education (RESEN) from 2014 is dedicated to education and conflict. What seems clear, however, is that there has been little to no targeted central government support to education in conflict-affected contexts, neither in terms of funding nor in terms of administrative support or pedagogical activities.

### *A1.3.4 How the education sector continues to operate despite conflict*

#### *Domestic dynamics*

Despite the ongoing violence, the education sector has continued to operate in the conflict-affected eastern provinces of the DRC due to a range of factors, including shared governance arrangements between government and faith-based organisations (Titeca and De Herdt 2011), household contributions and

the concomitant perceived value of education (Verhaghe 2017), the brokered informal expansion of the education sector (Brandt 2017), and redeployment of internally displaced teachers (Brandt 2019b). It is important to bear in mind, however, that these factors can be double-edged: Household contributions allow the education sector to continue to operate, but they can also cause dropouts, particular in households who cannot afford them; the informal brokered expansion can bring schools to the remote areas, but can exacerbate the inefficiency of educational governance and expenditures at a macro-level; redeploying teachers under the threat of withdrawing salaries ensures the opening of schools, but neglects the psycho-social well-being of these teachers.

### International dynamics

Educational actors are coordinating their activities in the education humanitarian cluster. However, education was the least funded humanitarian sector in 2014, when only 10 per cent of the targeted population were served (Common Humanitarian Fund 2015). A study published by Save the Children on education in emergencies in the DRC summarises the main reasons for education interventions in conflict affected contexts: The fact that Communities prioritise education, child protection, cross-cutting with other humanitarian sectors, building resilience, transforming communities, envisaging opportunities in the future (Gladwell and Tanner 2014). The Tuungane project provided evidence for communities' strong preference for education-related interventions, such as classroom construction (Humphreys, Sanchez de la Sierra, and van der Windt 2014, 16). Common education related interventions in the DRC are: classroom construction (temporary or durable), distribution of playground / school / student kits, training teachers and head teachers (e.g. on "Peace Education, Classroom Management, Psychosocial support and the DRC national curriculum" (Norwegian Refugee Council 2014)), training of parental committees, development of child-friendly spaces, awareness campaigns (AVSI 2011), integrating "conflict transformation notions in public education and training curricula" (Search for Common Ground, n.d., 7), support for school fees (UNICEF 2010), school meals as well as interventions in relation to peacebuilding activities (UNICEF 2015).

#### *A1.3.5 Education in Tanganyika*

Tanganyika is among the provinces with the highest number of out-of-school children in rural areas (De Herdt, Marivoet, and Muhigirwa 2015, 118). The likelihood of being out-of-school in Tanganyika is 600-2500 per cent higher than, for example, in urban parts of Kongo Central (De Herdt, Marivoet, and Muhigirwa 2015, 124).

Similar to the rest of the country, the educational administration has undergone a decentralisation process over the last years (Brandt and Moshonas, n.d.). There is now a minimum of twelve educational sub-divisions, not all of which can

function effectively due to a shortage of funding. Furthermore, approximately 31 faith-based offices exist in Tanganyika as of mid-2019 (SECOPE data).

We also note that major educational projects took place in Tanganyika, such as Vas-y fille, Tuungane and Learning to Read in a Healing Classroom (Randall *et al.* 2017; Humphreys, Sanchez de la Sierra, and van der Windt 2014; Torrente *et al.* 2012).

## Annexe 2

### A2 Theoretical background

#### A2.1 The impact of armed conflict on the education of young girls

While the literature on violent conflict on education has found differentiated effects of conflict on girl's and boy's education, there is no consensus on whether or not the impact is larger for girls or boys, and the empirical evidence is mixed. Studies from a range of conflict-affected contexts have found that the impact of violent conflict on girls' education tends to be greater than on boys' (Salem 2018; Singh and Shemyakina 2016; Shemyakina 2011; Chamarbagwala and Morán 2011). Other studies, however, show boys are disproportionately targeted for recruitment or conscription by armed actors, and that financial constraints force them to leave school to join the labour market, as was the case during the conflict in Timor Leste (Justino et al 2013). Akresh and de Walque (2008) found that the Rwandan genocide lowered the probability of grade progression for both boys and girls, but found stronger negative impact for boys. There are also cases where the levels of girls' education were so low before a conflict that boys' educational achievement appears to suffer a much sharper decline (Omoeva et al. 2016; Guariso and Verpoorten 2013; Buvinić et al. 2013). While the extent and nature of the impact on girls' education is highly context specific, even within a given armed conflict (Buvinić et al. 2013), common constraining or enabling factors of girl's access to quality education, and factors that increase/decrease the marginalisation of girls more broadly, emerge from the literature: These include physical security and gender-based violence, displacement, economic coping strategies, the politicisation of girls' education, the type of education provision available, and access to public services, which we briefly review here.

##### *A2.1.1 Physical security and gender-based violence (GBV)*

The security risks associated with attending school are among the central factors inhibiting girls' access to education during conflict. Recent large-scale studies have found an increase in deliberate attacks on girls' schools and their staff, especially in conflicts where opposition to girls' education forms part of an armed group's ideological motivation (GCPEA 2018; UNICEF 2017; Justino 2016). Forced recruitment into or abduction by armed groups also has a significant negative impact on girls' school attendance. Schools themselves can become spaces where forced recruitment takes place, and the journey to and from school can be a time of heightened vulnerability (Salem 2018; Valente 2014). Though less likely to be conscripted than boys, girls' role as child soldiers is well-documented, as is the practice of abduction as forced wives or sexual slaves (Save the Children 2018a; Omoeva et al. 2016; Wood 2009). The impact on the

education of enrolment into violent groups is significant, both in terms of missed months or years of schooling, psychological harm, and in terms of the many difficulties they face in re-entering education after their return (Pereznieto *et al.* 2017; UNCEDAW 2015). The effect on the remaining (non-recruited) population of girls can also be significant, as families are more likely to prevent girls from attending school where rates of forced recruitment are higher (Alam *et al.* 2016; Valente 2014). Further studies show that where unmarried girls are preferred for conscription, early marriage can be used by families as a protective strategy (Hutchinson *et al.* 2016; Valente 2014). As girls who are married early are amongst the groups least likely to be in school, this has a noticeable impact on girls' education (Salem 2018).

Heightened risks of GBV, particularly sexual violence, act as a strong constraint on girls' education in conflict-affected areas. This can result from the use of rape by state forces or armed groups as a deliberate military or political strategy (GCPEA 2018; Wood 2009). It can also result from the breakdown of mechanisms for restricting and punishing perpetrators, which contributes to an atmosphere of impunity for sexual violence (Salem 2018). As in the case of forced recruitment, both the fact and the threat of sexual violence are powerful deterrents preventing school attendance (GCPEA 2018; Sommer *et al.* 2018b; UNESCO 2011), particularly for adolescent girls in contexts where reputation and marriageability are of paramount importance (Landis *et al.* 2018; Buvinić *et al.* 2013). This can be another factor driving up rates of early marriage, with its consequent impact on education (Pereznieto *et al.* 2017). The presence of one or more of these threats mean that proximity to school buildings becomes a key determinant of girls' school attendance. Studies in conflict-affected contexts show that the further a girl must travel to school, the less likely she is to attend, while the presence of village-based schools can have a significant positive impact on attendance (Sperling and Winthrop 2015; Burde and Linden 2013).

Moreover, a number of recent studies find that girls are also subjected to increased levels of GBV from their own communities during and after armed conflict (Read-Hamilton and Marsh 2016; Verwimp and Van Bavel 2013). Sommer *et al.* find that high incidences of violence and its consequent normalisation in society lead to men and boys to assert a more harmful, violent form of masculinity (Sommer *et al.* 2018a, 2018b; Kılınç *et al.* 2018). Other studies found conflict to be associated with increased levels of intimate partner violence (IPV) (Østby 2016; Anderlini 2011). This is especially pertinent considering the increased levels of early marriage in many conflict-affected areas, as girls in early and forced marriages are already at higher risk of experiencing IPV (Stöckl *et al.* 2014). Where this hardening of gendered norms exists, it is often accompanied by the belief that girls themselves, and to a lesser extent, their caregivers, bear the responsibility for avoiding or mitigating the risk of sexual violence (Sommer *et al.* 2018a; Sommer *et al.* 2018b). This in turn

increases the stigma attached to girls who experience GBV, further marginalising them (Greene *et al.* 2013; Stark *et al.* 2017).

### *A2.1.2 Displacement*

Displacement, whether as an IDP or refugee, has significant educational impacts on girls. There are some situations, particularly in IDP or refugee camps, where girls may in fact have better access to education than in their home setting (Perezniето *et al.* 2017). Some studies contradict this, however, finding worse educational outcomes for girls who were victims of forced displacement, even in camp settings (Verwimp and Van Bavel 2013). The broad age range of students in camp schools, a result of years of schooling missed through conflict, can act as a constraint on girls' attendance, particularly where sharing space with older adolescent boys or young men increases the perceived or actual threat of GBV (Salem 2018). Girls can also face greater barriers in accessing education when they attend school in camps, such as lower levels of language proficiency when attending as refugees (Alam *et al.* 2016). The marginalising effect of these factors is often intensified by the experience of displacement, with unaccompanied girls being the most vulnerable group (Perezniето *et al.* 2017). The risk of early marriage, either as an economic coping strategy or as a protection against sexual violence, is particularly high, as found in this study of Syrian refugee girls (Bartels *et al.* 2018). As with education, access to services for girls in IDP or refugee camps can sometimes be better than in their home context, though those displaced to urban areas still struggle (Wharton and Uwaifo Oyelere 2011).

### *A2.1.3 Household economic decision-making*

The economic impact of conflict on household's economic decisions is also a key factor influencing girls' education, both in terms of attendance and enrolment. Research in a range of contexts demonstrates that in situations of increased financial hardship, families are more likely to see the education of children, and particularly of girls, as an unaffordable opportunity cost (Akresh and De Walque 2008; Shemyakina 2006; Perezniето *et al.* 2017; Alam *et al.* 2016; Roy and Singh 2016). In unstable, rural contexts where girls are at greater perceived risk of violence, the cost of transporting girls to school (by bus or public transport) can become too great a financial burden (Jamal 2016). Households may also find it necessary to engage girls in unpaid work or care in the home, or, less often, to rely on them for financial/in kind contributions from child labour (Salem 2018; Perezniето *et al.* 2017; UNESCO 2011). Economic hardship is yet another driver of early marriage in many conflict-affected contexts, where girls are seen as a financial burden, and where the local economy and culture is such that they are not able to contribute financially (Perezniето *et al.* 2017; Alam *et al.* 2016). There is some mixed evidence that social protection programmes can act to mitigate such economic impacts of conflict, either through cash transfers or school feeding programmes with take-home rations linked to girls' school

attendance (Perezniето *et al.* 2017). There are, however, concerns over the additional security risks this poses in conflict situations (Perezniето *et al.* 2017).

Other economic factors also contribute to girls' marginalisation during violent conflict. In a review of studies of economic decision-making during conflict, Minoiu and Shemyakina (2014) found a greater general bias against girls during times of conflict-induced economic stress. Girls are more likely to bear the burden of unpaid work or care in the household, and less likely to be used for income-generating work (Diwakar 2015; UNESCO 2011). As discussed above, they are more likely to be married younger, which in turn means pregnancy and motherhood are likely to occur earlier (Hutchinson *et al.* 2016). There is also a greater risk of reliance on transactional sex or sex work as a strategy for coping with economic hardship (Sommer *et al.* 2018b; Hutchinson *et al.* 2016). The increased risks associated with transactional sex and sex work, in terms of GBV (Hutchinson *et al.* 2016) and HIV transmission, especially in cases of age-disparate transactional sex, and the attached stigma serve to further exclude girls (Salem 2018). There can also be a rise in trafficking as a result of conflict-induced poverty (Salem 2018; Save the Children 2018a).

#### *A2.1.4 The politicisation of girls' education*

In some conflict-affected contexts, girls' education becomes an explicit part of the political agenda of armed actors, as in the case of armed groups motivated by religious extremism and strongly opposed to girls' education (GCPEA 2018; Reyes *et al.* 2013). The fear of both targeting by armed groups, or of contradicting influential religious authorities has a strong, negative impact on girls' enrolment and attendance in such situations (Jamal 2016). In other cases, however, ideology and politicisation of girl's education can act positively on girl's education. This was the case during the Maoist insurgency in Nepal, where part of the group's political manifesto was to improve girls' access to education, and measures of girls' educational progress remained stable or improved during conflict (Pivovarova and Swee 2015; Valente 2014). Girls' education in conflict and post-conflict settings can also be affected by the degree to which state and international multilateral actors consider it as a politically expedient focus and therefore deserving of funding. Education projects in conflict settings in general are not a budgetary priority (GPE 2018), with girls' education historically receiving particularly little support (UNESCO 2015). Evidence from Timor Leste, where a UN programme to rebuild school infrastructure prioritised redressing gender inequalities, shows higher rates of girls' education post-conflict, demonstrating the potential for well-directed funding to be a positive influencing factor (Justino *et al.* 2013).

#### *A2.1.5 Types of education provision*

Girls' educational outcomes are also influenced by the type of education provision available to them. Within formal education systems, studies across

different cultural contexts have found the presence of female teachers or classroom assistants in schools to have a significant enabling effect on girls' education (Salem 2018; Sommer *et al.* 2018b; Jamal 2016; Roy and Singh 2016). The literature does not mention specific difficulties in retaining female teaching staff in conflict settings, although restrictions on girls' mobility and threats of gender-based violence may also constrain female teachers. More broadly, there is some limited evidence to show that schools with an explicitly gender-sensitive approach achieve better outcomes for girls (Plan UK 2018). Studies by Sommer *et al.* (2018b) found that a school setting perceived by the local community to be effectively run by trusted authority figures made families more likely to send girls at risk of sexual violence to school in fragile contexts in DRC and Ethiopia. Some studies also discuss the provision of education beyond formal schooling in conflict-affected areas. Razzaq (2016) found that community-based and supported schools were effective in improving girls' attendance in conflict-affected areas of Pakistan. Alternative education models, such as home-based schools, flexible tutoring programmes or radio-based teaching, have been shown to allow girls at risk of being out of school improved access to education, particularly adolescent girls with heavy demands of unpaid work (Pereznieto *et al.* 2017).

#### *A2.1.6 Access to public services*

Restricted access to public services, in particular health care, can also cause a negative impact on girl's education, notably on adolescent girls. Healthcare infrastructure, often overburdened and under-resourced in low and middle-income countries, is critically weakened by conflict (Douthit 2018). Where services do exist, the ability of girls to access them may be restricted by the increased limits on their mobility, particularly where there is stigma attached to the health care need, as with sexual and reproductive health, as they may have less freedom to leave home without older relatives (Sommer *et al.* 2018b; UNFPA 2016). Major health risks made worse by conflict include early pregnancy, with childbirth the leading cause of death among adolescent girls in developing countries (Salem 2018). Accessing sexual and reproductive health care becomes an even greater priority during conflict, bearing in mind increased rates of sexual violence and rape, as does access to contraception and abortion services, when they exist. Lack of provision and access has been linked to higher rates of unsafe abortion in conflict-affected contexts (Salem 2018). In some contexts, the greatest barriers to access are faced by those who have suffered the most extreme sexual violence, as in the case of returned abductees (Amone-P'Olak *et al.* 2016). Accessing sanitation and menstrual hygiene facilities poses another significant barrier to girls in conflict. Lack of safe, clean, private sanitation exposes girls in low and middle-income countries to elevated risks of sexual violence, disease and stigma (Salem 2018; Sperling and Winthrop 2015). During conflict, when these risks are already elevated for girls, lack of

appropriate facilities can contribute significantly to social exclusion (Salem 2018; Sommer *et al.* 2018b).

Furthermore, girls who were abducted by armed groups also sometimes face exclusion from disarmament, demobilisation and reintegration (DDR) programmes designed specifically for former child soldiers. In the case of Sierra Leone, participation in the DDR programme was contingent on handing in a weapon, which girls were generally not allowed to keep by armed groups, thereby preventing them from accessing financial and other supports (Denov and Maclure 2006).

#### *A2.1.7 Intersecting risks*

So far, the discussion has centred on girls as a homogenous group, while in reality, some groups of girls within the broader population are at heightened risk of being constrained by the factors mentioned above, such as those from ethnic, political or regional minorities (such as the Twa populations on which this study will partially focus), as well as those from rural areas. Girls with disabilities are the most vulnerable to educational exclusion in general, an effect exacerbated during conflict (Jones *et al.* 2016). Returned abductees and survivors of sexual violence, particularly those known to have contracted HIV, often face stigma in attending school (Salem 2018). Pregnant adolescent girls are overwhelmingly likely to be excluded from school, sometimes by official state legislation, but more commonly by informal societal norms (Buvinić *et al.* 2013; UNESCO 2011). Some evidence shows daughters in female-headed households can also be disproportionately affected by conflict-induced constraints on education (Shemyakina 2011).

### **A2.2 Social networks and education**

Although not always explicitly referred to in those terms, social networks have been shown to play a key role in the education of children in a range of intersecting literatures. The central role of the family – the ‘core’ social network and the primary institution – in mediating economic interactions and decisions ranging from work, human capital investment, marriage, consumption, child rearing and child education, among others, is well established (Todd and Wolpin 2003; Rosenzweig and Schultz 1982; Strauss and Thomas 1995; Behrman 1988; Behrman 1997). The absence or loss of core social networks – in particular, the nuclear family – has substantial negative effects on the education of children (Akresh and de Walque 2008, Behrman *et al.* 1980). However, the existence of core social networks is not a sufficient condition to mitigate the effects of conflict, as the quality of support and care by these networks is also crucial for a range of outcomes for children. Studies have documented the significant education and health costs for children who remain in homes while their parents migrate for work (see Nobles 2013), with the migration of the father

being associated with lower educational aspirations (Nobles 2011), a reduction in hours spent studying (Antman 2011) and lower numbers of years spent in education (McKenzie 2005). Most mechanisms proposed in the literature stress the intricacy of a network of household members who provide nurture, care and economic resources for the development of the child in the household.

Attention to primary caregivers and nuclear family, however, has tended to cloud the role that the wider family networks play in household decision making. Households (or families) do not always correspond to the simple model of parents and children, and even less so in developing countries. Yet, relatively few studies have investigated the role of other adult household members in household decision-making, and particularly in relation to education. The existing empirical literature suggests that they play an important role. Angelucci *et al.* (2017) found that the PROGRESA programme in Mexico raised secondary enrolment among households which were embedded in an extended family network, as compared to the 'isolated' families. They attribute this effect to a redistribution of resources within the extended family network. Similarly, LaFave and Thomas (2017) find that non co-residents family members are able to efficiently allocate and share resources with other family member, and that such allocation decisions positively affect children's health and educational outcomes. While households form the first port of risk sharing, informal arrangements can transcend the household boundaries in the space occupied by extended family and kinship networks. A network of close relatives or "kin group" can also provide other forms of support that have a direct or indirect effect on children's education, such as informal credit. Another example is child fostering, which is prevalent in poor countries and is usually done between close relatives, and can have effects on children's educational outcomes. Indeed, child fostering strategies may enable children to attend distant schools (Akresh 2004), and overcome the loss of a parent or orphanage, thus mitigating the negative impact of the loss of nuclear family networks on children's education (Akresh, 2005; Evans 2004).

Family and close-kin networks are often embedded within larger social networks, such as extended kinship networks, ethnic groups or sub-castes. These can have a range of functions, from risk-sharing (for instance, Fafchamps and Lund 2003, Rosenzwerig 1989, Udry 1994), to mediators of access to markets, employment and economic resources or activity more broadly (Munshi 2003; Fisman 2003; Meagher 2010). 'Large' social networks can regulate economic, social and political activity, through the enforcement of contractual agreements and transactions which operates through norms of trust and reciprocity embedded within these networks (Ferrara 2003; Sanchez de la Sierra Forthcoming; Meagher 2010). Given that they condition access to resources and a range of economic, political and social activity, the structure and characteristics of social networks can have an influence on a range of individual level outcomes,

which the empirical literature has started to explore. Segmentary lineage societies, for example, have been shown to have particularly high levels of intra-group trust, which facilitates 'internal' transactions (Moscona *et al.* 2017). Studying matrilineal kinship systems in DRC, Lowes (2018) highlights that children in matrilineal families are healthier and better educated, and the women experience less domestic violence. This will have implications for our study of the difference between Twa and Bantu lineage systems, an issue we return to later in the paper.

### A2.3 Social networks and violent conflict

The social science literature on violent conflict has increasingly focused on the central role that social networks play in a range of 'social processes of civil war' (Wood 2008),<sup>24</sup> and their importance in understanding the relationship between military and civilian institutions and actors in contexts of protracted violence. The role that social networks play in structuring violent mobilisation or violent collective action, and the ways in which insurgencies or other organisations engaged in collective violence 'appropriate'<sup>25</sup> existing social networks, are well established and researched (Gould 1991, 1993, 1995; Petersen 2001; Scacco 2009; Staniland 2012, 2015; McDoom 2013). The literature on armed organisations (from gangs to national armies) has also analysed how social networks underpin the mechanisms by which these organisations control their members, which range from entry rituals, internal hierarchies, codes of conduct, various forms of sanctions and punishment, as well as group bonding and peer pressure mechanisms that extend to the communities in which members are embedded (Gabriel and Savage 1979; Gutiérrez Sanin 2008; Kenny 2008; Rush 1999, 2001). Furthermore, the social basis of armed organisations can have longstanding historical origins, which are key in understanding the control that armed actors exert over local societies and social networks in contexts of conflict. Suzette Heald (2006, 2007) shows that rural "bandits" were deeply entrenched into the very fabric of rural Tanzanian societies, through networks of families that gave a "tentacle" form of presence to these organisations (Heald 2007 p.6). Such configurations are also prevalent in the eastern provinces of the DRC, where armed actors – from large scale rebel groups to small self-defence militias – have longstanding embeddedness in rural societies, often dating back to the 1960s or earlier (Verhaegen 1969; Stearns and Botiveau 2013). The forms of control that armed organisations exert over their members and their communities should therefore be understood as part of their wider insertion into the societies in which they evolve, which results from their institutional

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<sup>24</sup> Elizabeth Jean Wood defines such social processes of civil war as "the transformation of social actors, structures, norms and practices" (Wood 2008: 540).

<sup>25</sup> This expression is used by (Mc Adam, Tarrow, and Tilly 2001 p.115), also quoted in (Staniland 2012: 149).

genealogies and their social bases on one side, but also the multi-faceted roles that they come to play within these societies on the other.

Indeed, while coercion and violence are a central feature of their modes of control over populations, the emphasis on coercion and violence that has dominated depictions of violent organisations tends to cloud the wide range of roles they can play, as well as the general “adaptation” of civilian populations to their presence. As Verweijen (2013) has argued, civilians tend to adapt to the presence of such organisations, either strategically or by obligation. Such processes of adaptation and adjustment are numerous and diverse. They can be seen as the social manifestations of the adaptation to the novel political economies of protection whose emergence in times of high insecurity, and to the complex ‘politics of protection’ that derive from them (Raeymaekers and Vlassenroot 2004; Raeymaekers 2010; Pratten 2008). Indeed, in addition to business actors who strategically adjust to the necessity of obtaining “private” protection from armed actors in contexts of heightened insecurity, civilians often seek out protection from armed actors. These can take particular social manifestations, such as women who marry members of armed groups with the intention of obtaining protection (Morvan 2005), or civilians strategically developing social ties with armed actors to obtain various types of material, financial, political or other advantages (Verweijen 2013). Becoming an active member of these organisations can also be an essential aspect of these adaptations, as it can condition access to both individual and collective (for the household or the community) protection.

Thus, in militarised contexts, belonging to or developing networks with armed actors, either national military and non-state armed factions, conditions access to a range of material and immaterial goods, in particular protection, justice, property rights and market access. Of particular interest to our study, ‘activating’ existing relations with armed actors, or developing new ones, can become a key way in which households obtain protection and access resources, and thus condition their level of exposure to violence, and their capacity to send children to school. This relationship, however, is not linear. Indeed, having existing social ties to armed actors or developing ones can entail higher exposition to retaliatory violence, as well as exposure to violent mobilisation and exploitative forms of work that often prosper in militarised contexts.

Furthermore, there exists, to our knowledge, no literature that has directly linked conflict and education through the lens of social networks, and connected the two bodies of literature which we have reviewed. This provides a motivation for this study.

## Annexe 3

### A3 Research methodology

#### A3.1 Methodology of qualitative study

The qualitative component of this study is based on background research and fieldwork carried out in the province of Tanganyika, and the province of Ituri. The background research, carried out by Cyril Brandt and Gauthier Marchais, focused on analysing existing published and online sources on the Twa-Bantu conflict of the 2010s, the history of social and political organisation in Tanganyika, the education sector in Tanganyika, and the history of Twa populations in the province and in DRC.

The fieldwork was carried out in two phases in 2019. In March 2019, Eustache Kulumbwa and Gauthier Marchais carried out a series of preliminary interviews in Kalemie, Tabacongo and the areas around the towns, in order to shape the qualitative questionnaire, and orient the research. The second phase was carried out by Eustache Kulumbwa and Olga Kithumbu, and lasted two months (April and May 2019), and consisted of fieldwork and interviews carried out in the territories of Kalemie, Kongolo and Nyunzu, in the province of Tanganyika. In the territories of Kalemie and Kongolo, the fieldwork was concentrated around the areas of implementation of the REALISE programme, in order to understand the context in which the programme operates. A further two weeks of interviews were carried out in the territory of Nyunzu, because, although the REALISE programme is not implemented in that territory, the territory was one of the most affected by the Twa rebellion, and a range of key actors involved in the violent conflict that affected Kalemie are based in Nyunzu. A third phase of fieldwork, from May 26 to June 15, 2019, was carried out by Eustache Kulumbwa and Olga Kithumbu in the territories of Djugu and Irumu in the province of Ituri. This phase of field research was concentrated on REALISE schools.

A total of 104 interviews were carried out (74 in Tanganyika and 30 in Ituri). The fieldwork consisted mainly of interviews carried out with Key Informants, chosen for their specialist knowledge of the study's topics: Civilian and military authorities, education specialists – both from state and confessional schools – parents of schoolchildren and schoolchildren. The full list of interviews can be provided upon request, after anonymisation. The majority of interviews were individual, semi-structured interviews, guided by the qualitative questionnaire available in Annexe 3B.

A small number of focus groups were also carried out. The interviews focused on the following themes:

- The organisation and implementation of the REALISE programme;
- The history of the violent conflict, including: The organisation of the violent actors, the spread of the violence, the mobilisation tactics;
- The organisation and structure of kinship groups and lineage systems;
- The effect of the violent conflict on schools – both REALISE and non-REALISE schools;
- The effect of the dynamics of conflict on households – from direct experience of violence, to mobilisation of household members;
- The specific effect of violent conflict on household's financial capacity to send their children to school;
- The role of social networks and connections in providing security or exposing to violence;
- The effect and perception of the different components of the REALISE project, by households, schoolteachers, and implementers;
- The socio-emotional well-being of children and parents.

Following the data collection, the interviews were translated and transcribed, and then entered into the qualitative data analysis software QDA. Direct quotes were translated by Cyril Brandt and Gauthier Marchais. Our data analysis is based around focused and open coding. Regarding focused coding we followed the idea of “sensitising concepts” (Bowen 2006) which means that the analysis and coding process was guided by theory and hypotheses.

#### *A3.1.1 Limitations*

A key challenge in researching the Twa populations of Tanganyika has been the widespread prejudice that is held against Twa populations, and is prevalent at all levels of society, from official and academic discourse, to quotidian life among non-Twa populations. These revolve around a range of pre-conceived and often essentialist ideas about the Twa, often highly derogatory and prejudiced: That the Twa are inherently lazy, that they cannot be trusted, that they are reluctant to any type of effort or work, that they are naturally prone to stealing, that they have irrational behaviour, that they are intellectually limited – among others. Such discourses of prejudice have a long genealogy, as they partially derive from discourses on ethnicity developed during the colonial era and entrenched as official discourse by the Congolese state in the post-colonial era, but also from discourses developed by majority Bantu populations and political authorities – particularly around the customary political order prevalent in the region. These

discourses are both the manifestations, and a key mechanism, of the marginalisation of the Twa. During the research and fieldwork, we have found them in all spheres: From official documents produced about the Twa populations, to Universities in the province of Tanganyika, to education actors, to quotidian remarks and discourses about the Twa. Surprisingly, they were also present in the discourses of the Twa actors interviewed during the fieldwork, which is a testimony to the depth and extent of their hold in the collective psyche and popular discourse. They were particularly present, we have noticed, in relation to education (expanded in the analysis): For example, the idea that, despite being offered gratuity in schooling fees, the Twa refused and despised education, and were thus responsible for their exclusion from the education system, is extremely prevalent across the province.

As a result, during both the data collection phase and the analysis phase, the research team has sought to 'work and read against' these discourses, using a research praxis similar to those used to read against prejudiced discourse in colonial archives (Roque and Wagner 2012).

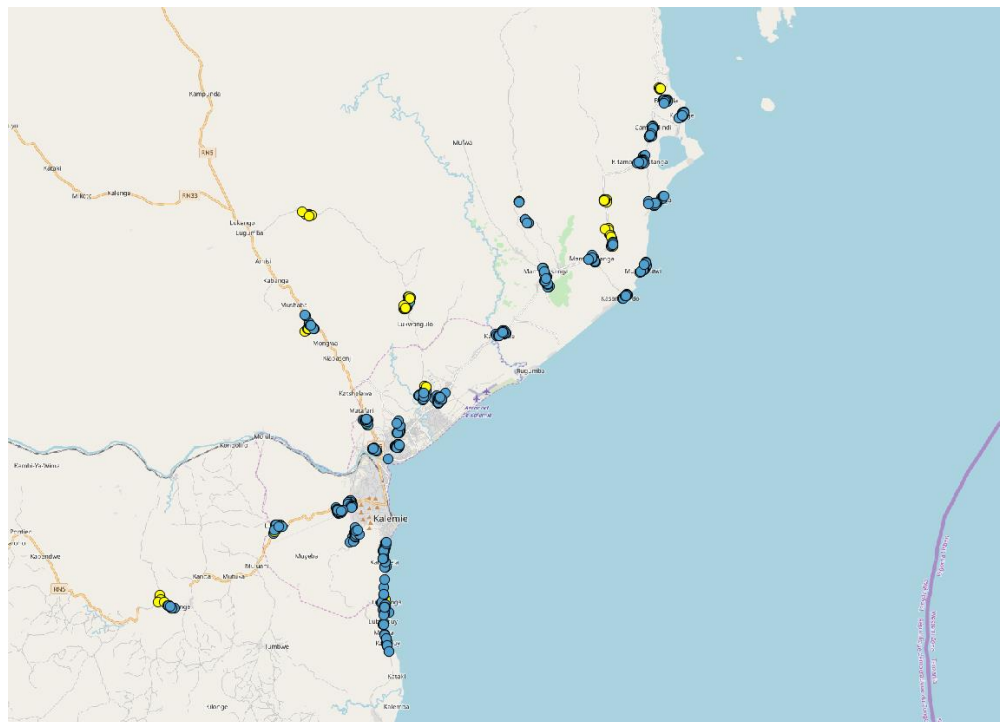
### **A3.2 Sampling methodology for quantitative study**

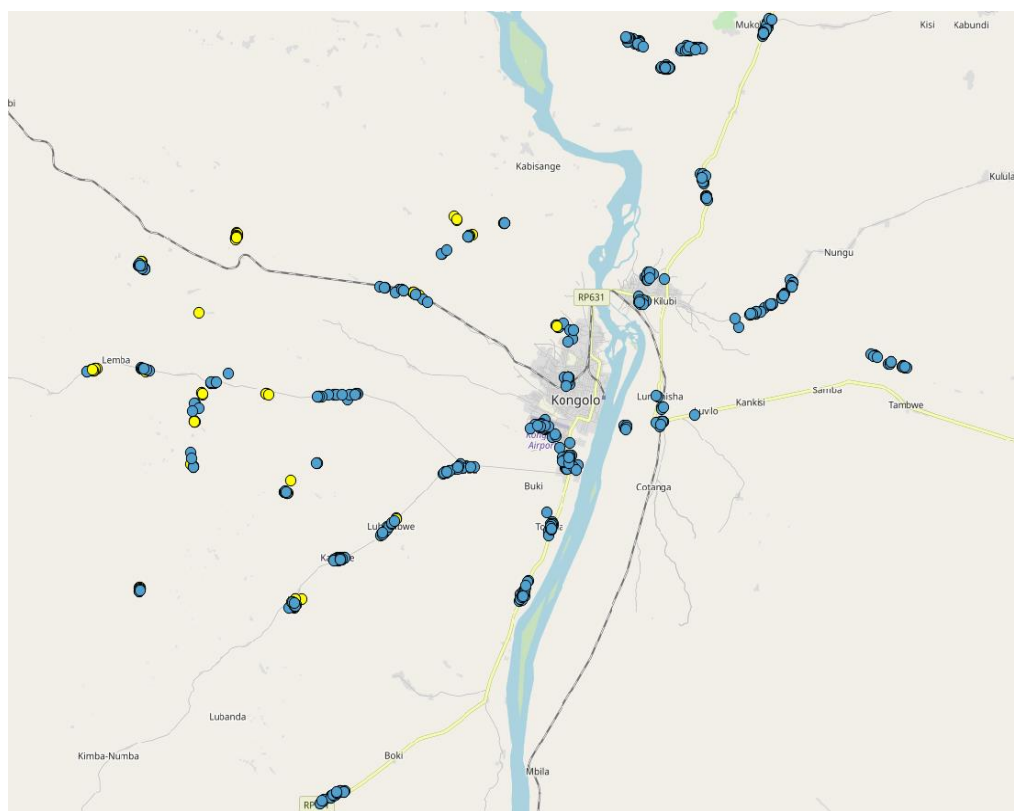
We collected primary quantitative data on a sample of girls and boys and their households in the territories of Kongolo and Kalemie in the Tanganyika province. The full quantitative questionnaire is available in Annexe 3.C. Our sample includes 60 villages, 31 in Kongolo and 29 in Kalemie. Within each village, we sampled an average of 22 households, to reach a total of 1,324 households. Within each household, we sampled one child (a boy or a girl) aged between 9 and 13 years old.

This age group has been selected in line with the evidence that grade progression with age is seldom achieved in DRC (FORCIER Baseline REALISE Report, 2018). Additionally, sampling children over 11 years old (Grade 6), gives us a sample of those who decided to not attend secondary school to fulfil other household commitments (like chores, work outside of household for income) and other societal roles (marriage and child bearing). The sample includes both girls and boys in order to carry out comparisons.

The sample was designed with two main objectives. The first was to target villages where REALISE schools were present (REALISE villages). The second objective was to target those villages within the set of REALISE villages where the presence of Twa's population was highest. The sample is therefore not representative of the province of Tanganyika.

### Figure A3.1 Surveyed households in Kalemie



**Figure A3.2 Surveyed households in Kongolo**

We identified 51 schools in 34 villages (21 in Kongolo and 13 in Kalemie) where REALISE is being implemented. With the support of the Marakuja Team, in particular Issa Kiemtore and Paulin Bazuzi, as well as the REALISE team at World Vision in Tanganyika (in particular Gerard Kajeje) we were able to group these 34 villages into 3 main categories: i) Villages with no presence of Twa, ii) Villages with presence of Twa within the village, iii) Villages with no presence of Twa within the village but with Twa populations residing within 15-20 kms<sup>26</sup> of the village. We stratified each of these categories of villages further into rural and urban areas and in the two territories of Kongolo and Kalemie. Since we intended to maximise the number of Twa households in our sample, where the REALISE villages satisfied conditions (ii) and (iii), all villages were included in our sample. However, where REALISE villages had no Twa presence, we randomly selected 50 per cent of the villages for our sample. Within these 26 REALISE villages we targeted a total of 572 households.

Next, we also targeted 34 additional non-REALISE villages. We proceeded as follows to select these villages. Starting from the REALISE villages with either Twa presence or with Twa populations residing within a 15-20 km radius, we randomly selected 26 villages distributed approximately evenly in number among the 12 REALISE villages with Twa presence; and 8 villages distributed

<sup>26</sup> The distance was selected based on feasibility in terms of cost and security.

approximately evenly in number among the 6 REALISE villages with a Twa community residing within the given radius. Thus, within these additional 34 non-REALISE villages we targeted 748 households.

Table A3.1 summarises the number of villages targeted across the various strata.

Within each village, we then selected a random sample of households. A household was considered eligible if it had at least one girl or boy aged between 9-13 years old. As we did not have a census of households for each village, the surveyors obtained the list of eligible households within each village from the village chief in case the village was small (below 200 households). From this list, they randomly selected the targeted number of households. We aimed to have as many Twa households as non-Twa households in the sample (a 50-50 split where possible). The sample was also stratified by gender within Twa households and non-Twa households. Out of the 22 households we targeted 50 per cent girls and 50 per cent boys within Twa and non-Twa households. If the village was large (more than 200 households), the surveyors listed all the neighbourhoods in the village and selected the neighbourhood with the most eligible Twa households. If there were no eligible Twa households in this village, the closest neighbourhood to the REALISE school was selected. Within this chosen neighbourhood, the listing and random selection of households then took place as described above.

In villages where the number of identified eligible Twa households was 0, inferior or equal to 11, the number of sampled households in the village remained at 22. All eligible Twa households were selected and a higher number of eligible non-Twa households were included to reach 22 selected households.

Within each village, 'specialists' were also selected for the specialist questionnaire. These were usually education specialists (such as the headteacher of the school, or teacher(s), and specialists of the history of the village (such as the village chief, or other local 'notables').

**Table A3.1 Sampling framework – village selection**

				Sample		
			No. of REALISE villages	No. of REALISE villages targeted	No. of non REALISE villages targeted	Total
<b>Kalemie</b>	Rural	Twa	3	3	13	16
		Non-Twa				
		Twa within radius	4	4	4	8
	Urban	Twa				
		Non-Twa	5	2	0	2
		Twa within radius	1	1	2	3
<b>Kongolo</b>	Rural	Twa	9	9	13	22
		Non-Twa	10	5	0	5
		Twa within radius				
	Urban	Twa				
		Non-Twa	1	1	0	1
		Twa within radius	1	1	2	3
<b>Tanganyika</b>		<b>Total</b>	<b>34</b>	<b>26</b>	<b>34</b>	<b>60</b>

The final sample includes 26 REALISE and 34 non-REALISE villages. The sample includes a total of 1,324 households, 566 in REALISE villages and 758 in non-REALISE villages. Of these 1,324 households, 197 are Twa and 1,127 non-Twa. Twa households therefore represent the 14 per cent of our sample.

There are 34 villages where the presence of Twa is zero. The sample includes 631 boys and 693 girls aged between 9-13 years old.

Table A3.2 and Table A3.3 show the distribution of our sampled children by gender, ethnicity and age. We achieved an almost 50-50 split in gender, with slightly more girls (4 percentage points more).

### Table A3.2 Distribution of children by ethnicity and gender

Sampled child's gender	Non-Twa Households	Twa Households	Total
Male (%)	47.6	48.2	47.7
Female (%)	52.4	51.8	52.3
<b>Total N</b>	<b>1,127</b>	<b>197</b>	<b>1,324</b>

We also achieved an almost equal distribution of children by age, with slightly lower proportion at the age of 11 for both girls and boys.

### Table A3.3 Distribution of children by age

Sampled child's age	Boys (%)	Girls (%)
9	23.9	21.6
10	19.3	19.6
11	15.1	15.3
12	22.0	21.9
13	19.7	21.5
<b>Total N</b>	<b>631</b>	<b>693</b>

## Annexe 4

### A4 Quantitative analysis

**Table A4.1 Regression results of effects of violence on child's work status**

	(1) Child works	(2) Child works	(3) Child works
Household has ever experienced violent attack since 1990	-0.060** (0.028)		
Household has experienced violent attacks since the child was born		-0.000 (0.029)	
Household has experienced violent attacks since the child was 6 years old			-0.023 (0.029)
Sampled child's age	0.033*** (0.007)	0.033*** (0.007)	0.033*** (0.007)
Sampled child is a girl	0.078*** (0.022)	0.079*** (0.022)	0.079*** (0.022)
Number of household members	-0.006 (0.005)	-0.007 (0.005)	-0.007 (0.005)
Main language: Swahili	-0.102*** (0.036)	-0.106*** (0.036)	-0.107*** (0.036)
Main language: South Kivu	-0.095 (0.119)	-0.109 (0.118)	-0.108 (0.118)
HH Head is Twa	0.003 (0.047)	0.001 (0.047)	0.000 (0.047)
Asset index	0.005 (0.008)	0.005 (0.008)	0.005 (0.008)
Household monthly mean income in last 12 months (1000's CDF)	-0.000** (0.000)	-0.000** (0.000)	-0.000** (0.000)
Number of landplots owned	-0.009 (0.010)	-0.009 (0.010)	-0.009 (0.010)
Constant	0.034 (0.086)	0.007 (0.086)	0.014 (0.086)
Village fixed effects	Yes	Yes	Yes
Observations	1,324	1,324	1,324
R-squared	0.206	0.203	0.203

### Table A4.1 notes

Note: This table shows the effects of conflict on probability of child working as estimated by OLS regression. Column 1 looks at the effect of conflict since 1990, Column 2 looks at conflict since child was born, Column 3 looks at conflict since child was 6 years old. Standard errors clustered at the village and children's age group level. \*, \*\*, \*\*\* denotes significant at 10, 5, and 1 per cent respectively.

Table A4.2 shows the detailed breakdown of school expenditure for the academic year 2018-19 as reported by households. The sample is children currently enrolled in school. The figures are reported in CDF and US Dollars.

Table A4.3 reports the results of OLS regression to study the effects of economic status on enrolment and work status of the child. The proxies used for economic status are – asset index, household monthly income, and number of land-plots owned by the household. Asset index is positively correlated with enrolment and increases the probability of child to have enrolled in school by 1 percentage point. It also increases the probability of the child staying in school versus dropping out by 1.4 percentage points. It has no statistically significant effect on child's work status. Income is negatively correlated with the child's work status, implying the child is less likely to work when income increases. However, the effect size is very small to have any meaningful interpretation. Ownership of land also increases the likelihood of the child staying in school instead of dropping out by 1.3 percentage point.

**Table A4.2 Average of school related expenditure for 2018–19**

Variable	(1) Mean CDF	(2) Mean US\$
Expenditure on school uniform in 2019	6959.58	4.18
Expenditure of books and stationary in 2019	4209.11	2.53
Expenditure on transport to and from school in 2019	0.46	0.00
Expenditure on teacher incentives in 2019	10893.76	6.54
Expenditure on school meals in 2019	46.53	0.03
Expenditure on school maintenance in 2019	233.30	0.14
Expenditure on in-school tutoring in 2019	6.93	0.00
Expenditure on school exam fees in 2019	1299.47	0.78
Expenditure on minerval in 2019	5454.37	3.27
Expenditure on operation costs in 2019	67.66	0.04
Expenditure on insurance for students in 2019	133.83	0.08
Expenditure on school promotion fees in 2019	120.15	0.07
Expenditure on inspection costs in 2019	352.76	0.21
Expenditure on other education related expenses in 2019	1685.86	1.01
Total education related expenses in 2019	31463.78	18.88
<b>N</b>	<b>1,096</b>	<b>1,096</b>

Notes: The table reports the school expenditure for all currently enrolled children, ie, 1,096 out of 1,324. Column 1 reports the average expenditure in CDF. Column 2 reports the average expenditure in US \$, where 1 CDF = 0.0006 US\$. The expenditure is reported for the school year 2018-2019.

**Table A4.3 Regression results of effect of economic status on enrolment and work**

VARIABLES	(1) Child has ever attended school (vs never enrolled)	(2) Child is currently enrolled (vs child dropped out)	(3) Child works
Asset index	0.010*** (0.003)	0.014*** (0.004)	0.005 (0.008)
Household monthly mean income in last 12 months (in 1000's of CDF)	0.000 (0.000)	0.000 (0.000)	-0.000** (0.000)
Number of land-plots owned	0.005 (0.005)	0.013*** (0.005)	-0.009 (0.010)
Household has experienced violent attacks since the child was 6 years old	-0.028* (0.017)	0.014 (0.024)	-0.023 (0.029)
Sampled child's age	0.011** (0.004)	-0.004 (0.005)	0.033*** (0.007)
Sampled child is a girl	-0.019 (0.013)	-0.020 (0.018)	0.079*** (0.022)
Number of household members	0.003 (0.002)	0.007** (0.003)	-0.007 (0.005)
Main language: Swahili	0.082*** (0.022)	-0.023 (0.022)	-0.107*** (0.036)
Main language: South Kivu	0.107* (0.056)	0.008 (0.046)	-0.108 (0.118)
HH head's ethnicity by blood: pygmies	-0.195*** (0.042)	-0.172*** (0.064)	0.000 (0.047)
Constant	0.761*** (0.054)	0.894*** (0.056)	0.014 (0.086)
Village Fixed effects	Yes	Yes	Yes
Observations	1,324	1,224	1,324
R-squared	0.266	0.176	0.203

Notes: Standard errors clustered at village and children's age group level. Village fixed effect used.

Column 1 dependent variable is if the child has ever been enrolled in school, ie, currently enrolled and drop out versus never enrolled. Column 2 dependent variable is if the child is currently enrolled in school versus drop out. Column 3 dependent variable is if the child works versus child does not work. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Table A4.4 reports the results of a regression to study the effects of network variables on enrolment and work status of the child. The network variables used are – number of non co-resident relatives, number of household members, number of authority figures known to the household, number of village groups the household is a member of. While non co-resident relatives have no effect on our outcomes of interest, household members increase the likelihood of child being enrolled instead of dropping out by 0.6 percentage point (a very small effect) and decrease the likelihood of a child working by 0.8 percentage point (also a very small effect). Knowing an authority figure is significantly correlated with a child having enrolled in school, increasing the likelihood by 1.5 percentage points. Membership of village groups also increases the likelihood of the child having enrolled in school by 3 percentage points.

**Table A4.4 Regression results of effect of network variables on enrolment and work**

VARIABLES	(1) Child has ever attended school (vs never enrolled)	(2) Child is currently enrolled (vs dropped out)	(3) Child works
Number of non co-resident relatives	0.001 (0.002)	0.002 (0.002)	0.002 (0.003)
Number of household members	0.003 (0.002)	0.006** (0.003)	-0.008 (0.005)
Number of authority figures that household knows	0.014* (0.008)	-0.005 (0.013)	0.000 (0.022)
Number of groups in the village the household is member of	0.028*** (0.009)	0.011 (0.010)	0.015 (0.018)
Patrilineal kinship system	0.028 (0.029)	-0.032 (0.026)	-0.044 (0.038)
Household part of a Mwami's lineage	-0.017 (0.019)	0.051** (0.023)	0.011 (0.037)
Household part of a Chef de Groupement's lineage	0.009 (0.019)	-0.025 (0.025)	0.022 (0.037)
Household part of a Chef de Village's lineage	-0.001 (0.017)	0.010 (0.022)	0.022 (0.027)

(Cont'd.)

**Table A4.4 (cont'd.)**

VARIABLES	Child has ever attended school (vs never enrolled)	Child is currently enrolled (vs dropped out)	Child works
Sampled child's age	0.011** (0.004)	-0.004 (0.005)	0.032*** (0.007)
Sampled child is a girl	-0.017 (0.014)	-0.022 (0.018)	0.079*** (0.022)
Main language: Swahili	0.084*** (0.022)	-0.022 (0.022)	-0.108*** (0.036)
Main language: South Kivu	0.105* (0.055)	0.009 (0.047)	-0.111 (0.120)
HH head's ethnicity by blood: pygmies	-0.188*** (0.043)	-0.177*** (0.064)	-0.004 (0.047)
Asset index	0.009*** (0.003)	0.015*** (0.004)	0.005 (0.008)
Household monthly mean income in last 12 months (1000's CDF)	-0.000 (0.000)	0.000 (0.000)	-0.000** (0.000)
Number of land-plots owned	0.003 (0.005)	0.012** (0.005)	-0.011 (0.010)
Household has experienced violent attacks since the child was 6 years old	-0.026 (0.017)	0.012 (0.024)	-0.023 (0.030)
Constant	0.696*** (0.058)	0.908*** (0.062)	0.028 (0.093)
Village fixed effects	Yes	Yes	Yes
Observations	1,324	1,224	1,324
R-squared	0.273	0.182	0.206

Notes: Standard errors clustered at village and children's age group level. Village fixed effect used. Column 1 dependent variable is if the child has ever been enrolled in school, ie, currently enrolled and drop out versus never enrolled. Column 2 dependent variable is if the child is currently enrolled in school versus drop out. Column 3 dependent variable is if the child works versus child does not work. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Table A4.5 Assets, authority figure and enrolment/work**

	Asset Index				
Knowing Authority Figures	1st quartile	2nd quartile	3rd quartile	4th quartile	Total
<i>Proportion of children never enrolled</i>					
None	18%	7%	7%	2%	9%
At least one	4%	5%	2%	0%	3%
<i>Proportion of children dropped out</i>					
None	14%	11%	7%	7%	10%
At least one	13%	7%	8%	7%	9%
<i>Proportion of children currently enrolled</i>					
None	68%	82%	86%	91%	81%
At least one	83%	88%	90%	93%	89%
<i>Proportion of children who work</i>					
None	25%	22%	29%	26%	25%
At least one	26%	26%	24%	21%	24%

**Table A4.6 Assets, savings group and enrolment/work**

	Asset Index				
Being part of Savings Groups	1st quartile	2nd quartile	3rd quartile	4th quartile	Total
<i>Proportion of children never enrolled</i>					
No	17%	7%	6%	2%	8%
Yes	0%	3%	2%	0%	1%
<i>Proportion of children dropped out</i>					
No	15%	11%	9%	8%	11%
Yes	0%	3%	2%	2%	2%
<i>Proportion of children currently enrolled</i>					
No	67%	82%	85%	91%	81%
Yes	100%	94%	96%	98%	97%
<i>Proportion of children who work</i>					
No	26%	22%	28%	23%	25%
Yes	15%	35%	28%	30%	27%

Figure A4.1 reports the effect of membership in a savings group on the probability of child working graphically. The regression estimated controls for household and individual characteristics, as well as village fixed effects. At each quartile of asset index, the 95% confidence interval includes 0, implying that there is no statistically significant effect of savings group membership on the probability of child working.

### Figure A4.1 Regression results of participation in savings group on child's work status

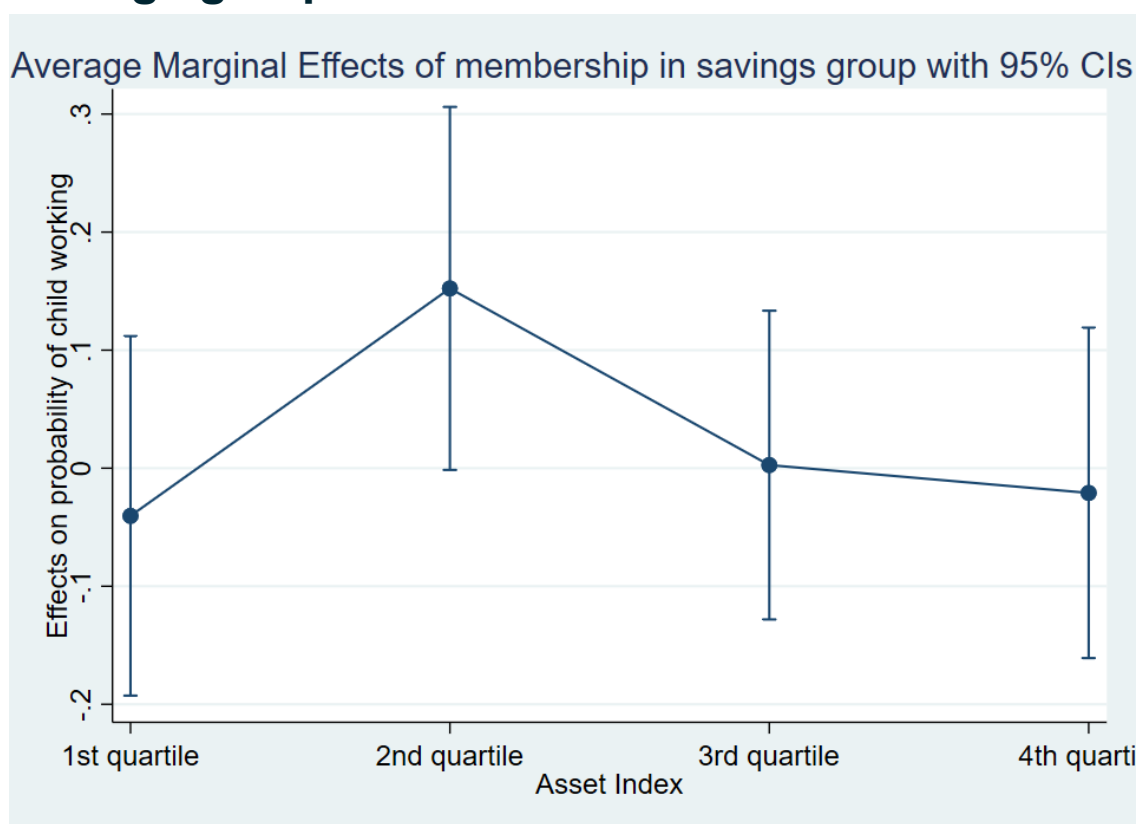


Table A4.7 reports the average proportion of children in the different enrolment categories and whether the child works by ethnicity. It additionally reports the t-test of difference in these average by ethnicity.

**Table A4.7 T-test of difference in average enrolment and work status by ethnicity**

	(1) Non-Twa Mean/SD	(2) Twa Mean/SD	t-test Difference (1)-(2)
Never attended school	0.037 [0.189]	0.294 [0.457]	-0.257***
Currently enrolled	0.885 [0.320]	0.503 [0.501]	0.382***
Dropped out	0.078 [0.268]	0.203 [0.403]	-0.125***
Child works	0.241 [0.428]	0.305 [0.461]	-0.063*
N	1,127	197	

Notes: \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Table A4.8 below reports the results of a regression to study the effects of conflict on enrolment by ethnicity. Children from Twa households more negatively affected by violence than non-Twa. When exposed to violence since 1990, children from Twa households are 9 percentage point (sum of coefficients on Twa\*HH has experienced violent attack since 1990 and HH head's ethnicity by blood: Twa) less likely to enrol in school as compared to Non-Twa households. When exposed to violence since the child was born, children from Twa households are 26 (sum of coefficients on Twa\*HH has experienced violent attack since child was born and HH head's ethnicity by blood: Twa) percentage points less likely to enrol in as compared to Non-Twa households. Finally, when exposed to more recent violence since the child was 6 years of age, children from Twa households are 28 percentage points (sum of coefficients on Twa\*HH has experienced violent attack since child was 6 years old and HH head's ethnicity by blood: Twa) less likely to go to school as compared to non-Twa households.

**Table A4.8 Regression results of effect of conflict on enrolment by ethnicity**

<b>VARIABLES</b>	<b>(1) Child has ever attended school (vs never enrolled)</b>	<b>(2) Child has ever attended school (vs never enrolled)</b>	<b>(3) Child has ever attended school (vs never enrolled)</b>
Household has experienced violent attack since 1990	0.000 (0.012)		
Twa*HH has experienced violent attack since 1990	-0.065 (0.066)		
Household has experienced violent attacks since the child was born		-0.006 (0.012)	
Twa*HH has experienced violent attack since child was born		-0.137** (0.065)	
Household has experienced violent attack since child was 6 years old			-0.004 (0.012) -0.165** (0.066)
HH head's ethnicity by blood: Twa	-0.157*** (0.051)	-0.126*** (0.044)	-0.116*** (0.043)
Sampled child's age	0.009* (0.005)	0.009* (0.005)	0.009* (0.005)
Sampled child is a girl	-0.022* (0.013)	-0.021 (0.013)	-0.021 (0.013)
Number of household members	0.005** (0.002)	0.005** (0.002)	0.005** (0.002)
Main language: Swahili	0.076*** (0.020)	0.084*** (0.020)	0.086*** (0.020)
Main language: South Kivu	0.064 (0.041)	0.072* (0.041)	0.072* (0.041)
Asset index	0.008*** (0.002)	0.008*** (0.002)	0.008*** (0.002)

(Cont'd.)

**Table A4.8 (cont'd.)**

<b>VARIABLES</b>	<b>Child has ever attended school (vs never enrolled)</b>	<b>Child has ever attended school (vs never enrolled)</b>	<b>Child has ever attended school (vs never enrolled)</b>
Household monthly mean income in last 12 months	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)
Number of land-plots owned	0.005 (0.004)	0.004 (0.004)	0.004 (0.004)
Constant	0.771*** (0.056)	0.765*** (0.056)	0.762*** (0.056)
Village Fixed Effects	No	No	No
Observations	1,324	1,324	1,324
R-squared	0.146	0.154	0.158

Notes: Standard errors clustered at village and children's age group level. Village fixed effect used. The dependent variable is if the child has ever been enrolled in school, ie, currently enrolled and drop out versus never enrolled. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Table A4.9 shows the detailed breakdown of school expenditure for the academic year 2018-19 by Ethnicity as reported by households. The sample is children currently enrolled in school. The figures are reported in CDF.

**Table A4.9 Average of school related expenditure for 2018-19 by ethnicity**

<b>Variable</b>	<b>(1) Non Twa Mean</b>	<b>(2) Twa Mean</b>	<b>(3) t-test (1)-(2)</b>
Expenditure on school uniform in 2019	7243.43	4101.01	3142.420***
Expenditure of books and stationary in 2019	4442.62	1857.58	2585.040***
Expenditure on transport to and from school in 2019	0.000	5.05	-5.051***
Expenditure on teacher incentives in 2019	11365.91	6138.89	5227.018***
Expenditure on school meals in 2019	51.15	0.000	51.153
Expenditure on school maintenance in 2019	256.47	0.000	256.469
Expenditure on in-school tutoring in 2019	7.62	0.000	7.623
Expenditure on school exam fees in 2019	1373.84	550.51	823.336
Expenditure on minerval in 2019	5525.57	4737.37	788.193
Expenditure on operation costs in 2019	61.84	126.26	-64.427
Expenditure on insurance for students in 2019	135.59	116.16	19.425
Expenditure on school promotion fees in 2019	132.08	0.000	132.077*
Expenditure on inspection costs in 2019	379.97	78.79	301.182*
Expenditure on other education related expenses in 2019	1768.41	854.55	913.868
Total education related expenses in 2019	32744.49	18566.16	14178.328***
<b>N</b>	<b>997</b>	<b>99</b>	

Notes: The value displayed for t-tests are the differences in the means across the groups.\*\*\*, \*\*, and \* indicate significance at the 1, 5, and 10 per cent critical level. The sample size is all currently enrolled children, i.e, 1,096 divided into Twa and non-Twa.

**Table A4.10 Proportion of boys and girls by enrolment and work status**

	(1) Male Mean/SD	(2) Female Mean/SD	t-test Difference (1)-(2)
Never attended school	0.065 [0.247]	0.085 [0.279]	-0.020
Currently enrolled	0.846 [0.361]	0.811 [0.392]	0.035*
Dropped out	0.089 [0.285]	0.104 [0.305]	-0.015
Child works	0.208 [0.406]	0.290 [0.454]	-0.082***
N	631	693	

Notes: \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Table A4.11 Proportion of boys and girls by enrolment and work status only for Twa households**

	(1) Male Mean/SD	(2) Female Mean/SD	t-test Difference (1)-(2)
Never attended school	0.263 [0.443]	0.324 [0.470]	-0.060
Currently enrolled	0.579 [0.496]	0.431 [0.498]	0.148**
Dropped out	0.158 [0.367]	0.245 [0.432]	-0.087
Child works	0.284 [0.453]	0.324 [0.470]	-0.039
N	95	102	

Notes: \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

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Library Road  
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+44 (0)1273 606261  
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